ATARI INTERFACE

March/April 1993
Volume No. 5

For the ST

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For the 8-Bit

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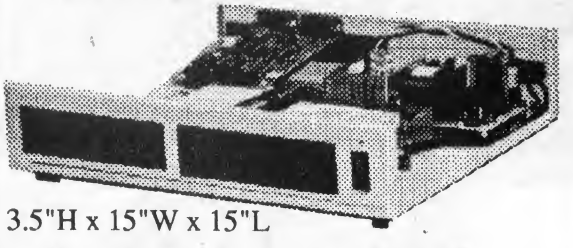

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Word Processing Tips for Search & Replace

Michael Bennett

These are just a few practical ideas on how to use the search and replace function in a word processing program.

Word processing programs have been identified as the only category of software that almost every computer user owns and makes use of on a regular basis. Whether they are published and marketed commercially or public domain/shareware programs, word processing programs are among the most useful to the typical computer user.

One of the nice things about a word processing program is its ability to search for and replace specified words or phrases. Though each WP program has its own set of commands, there are some general principles that can apply to any program. Keeping these points in mind may help you as you compose those reports, papers, essays or novels.

Search and replace (sometimes also called cut and paste) can be done selectively or globally. A selective search and replace allows you to specify a word or phrase to find in your document and then replace it on an individual basis. A global search and replace replaces every occurrence of a specified word or phrase automatically throughout the entire document.

If you have to search for the occurrences of a particular word, but do not wish to change it, try using just the search function. You have to specify what word(s) to look for, but using this method can be much faster and more accurate than scrolling through a long file.

WP programs can serve as simple databases utilizing the search function. Just enter the name of the person you are looking for as the search phrase and let the computer find it for you. But if you can't remember the name, you can enter any piece of information and the search function will find that person's record. It may find others, too, but just keep going until you find the one you want.

You can also use the search function to find sections of a file which you previously marked. Use a character that you don't normally use (such as *) and type it before the section you wish to mark. Then, when you're ready to find it again, search for that character. The cursor will be moved to each section you marked.

Another use for search and replace is when you wish to underline (or imbed any printer-specific codes into your text). If you use more than one printer and they require different codes for underlining, search and replace can quickly modify all your embedded underlining commands.

As an example, I use the normal underline command in my word processing program with my Star NX-1000, but when I use those same commands with the Atari XMM-801 printers at school, the underlining has gaps in it. So, if I have to print out a document on the XMM-801 all I do is look up the starting and ending underlining codes in the manual, search for the standard underline commands in the document, and replace them as needed.

But suppose your word processor's underline commands are the same for starting as for halting underlining (such as TextPro and SpeedScript—they both use SELECT-u before and after text to be underlined)?

No problem if you want to replace those commands with specific codes for double underlining or italics or whatever. To replace the starting command, specify the search word as a blank space followed by the command. The search specification for the ending command would be that command followed by a blank space or punctuation (you may have to do it multiple times to find all occurrences both in the middle and at the end of sentences).

Search and replace may also be used to delete words or portions of words in a file. Suppose you had typed "Donald" throughout a document, but wish to change it to "Don." Use the global search and replace function and search for "Donald" and replace it with "Don." The "ald" magically disappears.

Another shortcut in writing is to avoid typing long and repetitious words or phrases. Suppose you are writing about blood pressure and have to use the word 'sphygmomanometer' a number of times. Instead of typing it twelve times, just type something like ' SP '. Then, when you are finished use a global search and replace to replace ' SP ' with ' sphygmomanometer '.

Note the spaces surrounding the words above. When searching for individual words, be careful to include a blank space before (and possibly after) the word. Here is an example of what could happen if you don't. Suppose you want to replace the word "be" with "become." If you do a global search and replace, you would not only replace all "be"s

that are by themselves, but also all the "be"s in words such as "beyond" and "lobe." They would then read "becomeyond" and "lobecome," respectively. By putting a blank space before (and after) the word(s) to be replaced and the replacement word(s), this pitfall can be avoided.

Many of the Atari 8-bit word processors have only a 40-column display. Though this isn't ideal for typing tables or columns of data, tab maps can be set up to make this task easier.

First figure out exactly where you want the columns and space over to that point on a blank line. Then, type an unusual (and unused in your table or data) character (like * or +). Finish by spacing over to each new column and typing that same character. Then, delete that line with the delete (or block delete) function.

Set the search word/phrase as the unusual character you chose. Restore the deleted line every time you need the columns and press the appropriate keys to find the next search word/phrase. The cursor will glide along to each new tab position and your columns will line up nicely when the document is printed out. It sounds more complicated than it really is. Practice doing it a couple of times and you'll soon become proficient at it.

These are just a few practical ideas on how to use the search and replace function in a word processing program. I hope they have been helpful for you and that using them will make your word processing tasks easier.

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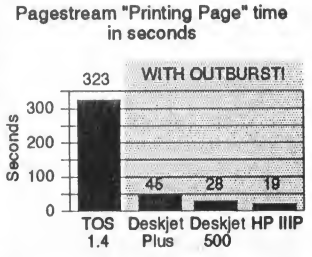

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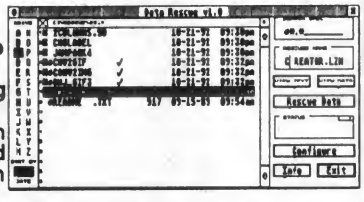

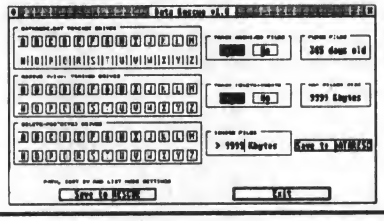

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Atari is Dead

Tim Holt

Atari is dead. To the surprise of very few, the Atari computer company, as a viable alternative to the Macintosh and IBM/MS-DOS computers, died in its sleep last night. A few relatives were at the company's side the night it passed away, but many former friends were nowhere to be seen when the venerable old man passed away. Authorities say the cause of death appears to be "natural causes," but close friends have repeated stories of depression, dementia, and general failing of health in the last few years of life. Atari was preceded in death by its brothers Osborne, Sinclair, and a host of other "first of its kind" computers that captured the attention of the computing public for a short period of time, but were unable to generate interest outside a few die-hard users. Funeral services are pending, as no one has stepped forward to claim the company as their own. 1972-1993. Rest in peace.

Those were hard words to write for me. I have lived, breathed, and worked on Atari computers for most of my "computer life," but I think it is time we, as a computer group, finally make the hard choice and proclaim the computer dead. We must now get on with our computer lives. We can always have a place in our hearts and memories for our "first love," but times change, the world changes, and, as Darwin pointed out, those that cannot adapt will eventually die. Atari is dead.

Here is the evidence that rigor mortis has set in on the body:

Who writes programs for your computer? Does Microsoft write for Atari? Does WordPerfect? How many major applications on the Macintosh or MS-DOS line actually make it to the Atari? Very few, if any.

Granted, the people that have stuck with the Atari line are VERY faithful, and the products they produce are very good, but having WordPerfect in your corner is like having Evander Holifield fight instead of Leon Spinks. It's nice to have lot's of Leon's, and they are all very nice, but we have needed a real contender for a long time, and we simply do not have one.

No one writes for us. WordPerfect said it best: "It doesn't sell, so why bother with it?" No one of real power in the computer world takes us seriously. Sure, you can import this text and that spreadsheet to the Atari, but why did we always have to do that? Because the programs that were written for the ST were always made to catch up to the rest of the computer world. Atari started fast, but lost the race. The computer is dead.

Take a second to look at what software is currently available and supported on the ST. It's a staggering thought that there is now no commercial word processor, spreadsheet or relational database package originating from and being supported by a US-based company for the Atari.

As for DTP packages, there's only one US-based company still supporting the Atari, and that's Soft-Logik. But, they currently have no plans to update the software for the ST/TT, while new packages and capabilities have been added for Amiga users of the package. In a recent e-mail message passed along by the recipient, here's what Michael Kasmaier from Soft-Logik had to say about the Atari ST/TT on their support BBS:

"To be honest, I never use an Atari anymore. The Atari is so dead now that we don't really use them at the office anymore and rely almost totally on user feedback. I refuse to use them now. Commodore's new AmigaDOS 3.0...is several years ahead of Atari's operating system."

The Atari is dead.

The Atari is still, after seven years, not taken seriously in the computing world and the business world. When you buy a computer, you aren't just buying a bunch of hardware and software. You are buying a way of doing something. Buy a PC and learn how to use Lotus 1-2-3, and you now have a marketable skill that many companies in the country value. Learn to use an Atari spreadsheet, no matter how powerful and user-friendly, and you have no skill that is accepted in the market.

You are no longer as experienced as those with a Mac or PC background, no matter how long you work on an Atari. There is no Microsoft Word, no Aldus Pagemaker, no Lotus 1-2-3, no Microsoft Excel for the Atari. There is no Grolier's Encyclopedia, there is no Carmen San Diego, no MS Works. Walk into B. Dalton Bookseller and see hundreds of Mac and MS-DOS titles on the bookshelves. You will not find ONE Atari title. NOT ONE. Look for Atari in Computer Shopper, BYTE, or any other general computing magazine. Atari is nowhere to be found. B. Dalton and computer publishers know that the Atari is dead.

Adapt or Die

Atari failed to adapt to its niche role as a home computer. Instead, through bumbling and fumbling, the computer went through a series of personality changes from home computer, to business computer, to DTP computer, to MIDI computer, and back to home computer, and now "multimedia" computer. Like a lost dog that never could find its way home, Atari wandered aimlessly for years. Now, it has been picked up by the dog catcher and gassed in the pound. Who let the dog out in the first place? Who cares. Hindsight is 20-20. The dog is dead. Atari is dead.

Atari suffered from a failure to keep its name in the public eye. There is not one user out there, with the possible exception of a Bob Brodie, that will say that Atari has done a good job promoting its product. NOT ONE!

How many YEARS have we been screaming for advertising? How many YEARS have we been pleading for this company to promote its products? How many YEARS have we been saying "Well, next year will be the year of Atari?" When I first read that statement in ST Report, it was 1988. FOUR years ago! No ad campaign, no public relations worth a plug nickel. (Oh, I forgot the Portfolio was in a movie...ooooooh.) What little print ads there have been have been placed in Atari magazines or MIDI/Music publications.

Atari could be selling alien technology out of Star Trek, but no one would pay attention, because no one knows Atari exists. Well, frankly, I have had enough. I don't care if tomorrow is the start of the "Year of Atari." It has become a joke. There will be no "Year of Atari" because the Atari is dead.

How does the company performs on the stock market? Atari stock has hovered around 1-5/8 per share for the better part of three years. It actually went up around $3 a share about the time Atari introduced the TT. But, when investors

saw that the TT was actually just an ST with muscles, back it slipped. Hands-on reports from the few people who have a Falcon (i.e., developers) or people who borrow them are indicating the Falcon is "just an ST with more sound and colors." That does not bode well.

Investors long ago realized that the company, and hence the computer, was dead; it is time we do so as well. Why haven't investors started buying Atari, now that the "new generation" has been introduced? Why aren't there ANY institutional investors in Atari? Because investors go by track record. Atari has a track record of a company that is dead. Investors know it; so should we.

I realize this article will make a few of you mad. And it should. Atari is dead. But, don't kill the messenger. Can you really look at your Atari computer and say "This format will be alive and healthy in 5 years?" No, you cannot. Not if you are being honest.

Now, can you look at the IBM PC and compatible market and say "This format will be alive and healthy in five years?" Yes, you can. Same for Macintosh. Perhaps not as robust as they are now, but they will be around.

Atari will not still be around, because Atari is dead. We will still use the darn thing, and since we are so loyal (or just stupid?), we will use them until the circuits have been fried and the monitors are out of focus. But, we should not expect anything exciting to come our way. An occasional program and an upgrade, but nothing worthy of note.

Sure, the Falcon will cause a ruckus for a few months, but it will fade, just like the STACY faded, just like the TT faded, just like MEGA faded, just like the MEGA STE faded. They all faded because ATARI is dead.

Only Atari users will buy new Atari products, because Atari won't do what it takes to market the machines. Recent online conferences with Sam Tramiel and others have shown that Atari somehow expects third-party people to advertise the Falcon for them. Judging from recent fiscal reports from Atari, they may not have enough money left to do the job, anyway.

So, that leaves only current Atari users as the market for the new machines, and our numbers have grown smaller and smaller each year. Try to find a user group with more than 30 members. There are not that many around anymore. Five years ago, there were bunches. Our numbers dwindle because Atari is dead.

Sorry to see you go, old friend, but I won't cry. I have been expecting it for too long, and actually suspected it years ago. I guess I have just been going through denial. But, now I see that you are dead. It is time to bury the corpse. Rest in peace, old friend. Rest in peace.

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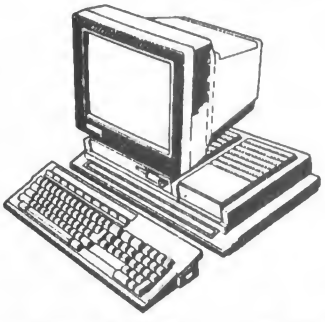

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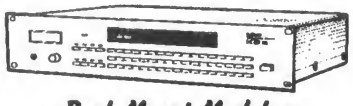

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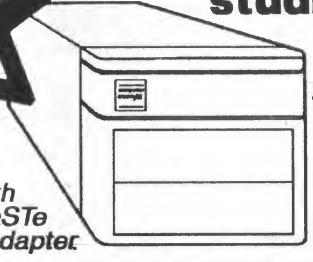

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I Thought Typewriters Were Obsolete!

Robert C. Arp, Jr.

There was a time when my Smith Corona electric typewriter was one of my most treasured assets. I was a young engineer then, trying to enhance my reputation by writing magazine articles for Byte, Radio Electronics, Popular Electronics and even some of the radio amateur magazines, such as CQ.

I vividly remember my last contribution to Byte, if for no other reason than the editor's request to send a copy of the article on disk or via modem. Say what? I was forced to call the editor to explain, somewhat chagrined, that I possessed neither modem nor personal computer.

The editor, perhaps reluctantly, agreed to "find someone" to type the article into a computer. I believe that this episode, as much as anything else, provided me with the impetus to return to the few existing computer retail stores to find a suitable replacement for the Smith Corona.

Enter the Computer

After several months of searching, rejecting the available IBMs, Apples and Amigas, I had given up and decided to stay with the typewriter. But on the way home one day, I happened to stop at my favorite electronic parts store. There, again by chance, I was introduced to the Atari 1040ST by a friendly salesman who listened to my tale of woe.

The 1040ST, 1ST Word and Word Writer ST begat the MEGA ST4 and 1ST Word Plus. I continued to write, using my new tools, but my interest in articles turned to those supporting the use of Atari computers. In addition, my programming interests turned from mainframes to personal computers.

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Exit the Typewriter

After the typewriter had been sitting idle for two years, I gave it away. I had come to believe that the instrument was completely obsolete. I had developed the habit of powering up the computer system for even extremely short letters.

Of course, one reason I have preferred to use the computer is its inherent ability to store copies of correspondence on disk. When typing articles, the ability to include graphics figures prominently in my state of satisfaction.

The one task for which the computer seems much less qualified, but for which the typewriter serves admirably, is filling in preprinted forms; income tax and insurance forms for example. Fortunately, most of these—all, until I recently learned otherwise—permit one to print instead of type.

The Proverbial Brick Wall

About two months ago, I had to acquire and fill in a government agency form having to do with business. Much to my surprise, the most prominent icon on the 5-part (four carbons) form was a very large asterisk beside a note stating that all information must be typed.

A bureaucratic dilemma designed specifically to "make my day." Solution—borrow a typewriter. From whom? All of my friends use computers. I consider it to be one of the signs of my maturity—that is the fact that I've learned to roll with the punches—so, I had to find a way to transform this setback into an advantage, somehow.

Powerful as our computers are, sometimes it pays to lift our eyes above the monitor to notice the calculator, pen and paper, or some other useful implement lurking in the shadows.

Being blessed with three strong, tall, good-looking, cooperative sons has proven to be advantageous over the years. No less so in this case. I called number one son in Sacramento and described the problem to him. After a week of research, he called and gave me the magic words Canon ES23.

Enter the Electronic Typewriter

Number one son did good. This baby has some very impressive features. It is part computer, part printer and part word processor, but it is smaller and less expensive than any of these. The street price is about $186.00.

The Canon ES23 electronic typewriter has multiline correction memory, five page format memory, bold print, underlining, impression control, search/replace, caps lock, word delete, automatic paper feed, automatic carriage return, justification, right margin alignment, centering (three ways), column layout, half backspace, backtrace, express backspace and 10, 12, and 15 characters per inch with appropriately installed optional daisy wheels.

There are nine types of daisy wheels available for $15.00 each, five types of ribbons at $4.50 or $5.50 each, and two types of correction tapes for $4.50 each. I suggest that accessories be ordered from the headquarters address in New York, unless you can verify that there are signs of intelligence at one of the other branch offices. I found no such indication at the Los Angeles branch.

Public Domain/Shareware Software

Games

#511 - Dungeon Master Maps for Levels 1-7
#512 - Dungeon Master Hints
#720 - Dungeon Master Maps for Levels 8-14
#835 - Adventure Game Toolkit - A shareware pkg that allows you to create your own top quality text adventure games. (DBL)
#898 - Chaos Strikes Back Maps for Levels 1-10
#899 - Chaos Strikes Back Help Files
#993 - Monochrome Games: Pac Man & Columns
#1015 - Cartographer Demo (for Dungeon Master)
#1040 - **Sorry V1.8** - For 2-4 players. (Color Only)
#1180 - Hac Man 2 - (Color/1 Meg RAM/DBL)
#1198/1252/1538 - Game Cheats/Hints/Help Files
#1220 - Tetris - 1 or 2 players simultaneously (Clr)
#1252 - Captive Help Files, ST Gaming Digest 12/91
#1255 - Jeopardy V3, Hearts (Color Only)
#1258 - Llamatron V1.0 - Arcade game (1 Meg/Clr)
#1277 - Mystic Well: Similar to Dungeon Master (Clr)
#1334 - Omega - Dungeon Exploration (1 Meg/DBL)
#1353 - Klatrix - Tetris/Klax combination (Color)
#1366 - Rolling Ronny - Super Mario type game (Clr)
#1371 - Blackjack Plus 3 Demo
#1389 - GRAV: Great rotate & thrust game (Color)
#1409 - Shoot'em Ups (Color Only) Galactic Inferno, Hunting Season & more
#1410 - Strabble - Similar to Scrabble for 1-6 players 45,000 word dictionary (1 Meg RAM/DBL)
#1411 - Deathbringer Demo (Color Only)
#1421 - Unnkulian Underworld - Text Adv. (1 Meg)
#1422 - Baby Jo in "Going Home" -Super Mario type game with good graphics/sound effects (Clr)
#1440 - Revenge of the Mutant Camels (Color)
#1447 - Dem. Man V2.0, Oh Craps, Poker Night (Clr)
#1448 - Triples - Puzzle game (DBL/Color)
#1458 - **DUNGEON LORD** - A very well written role playing game. (Color/1 Meg RAM/DBL)
#1503 - Star Nuker V1.02D - 2 player space war (Clr)
#1508 - Arcade Mania V1.08 (Color)
#1514 - DC Snowball Fight (Color/DBL)
#1523 - Poker Dice - Poker type game w/dice (Color)
#1536 - **MRS. MUNCIE** - Great Ms Pac Man Clone (Requires 1 Meg/DBL/Color)

Utilities & Applications

#399 - Degas/Degas Elite Printer Drivers
#400/800 - 3 1/2" Disk Labeling Programs
#443 - Intersect RAM Baby, Amortization
#688/866/1126/1345 - H.P. Deskjet/Laserjet Utilities
#768/938/1165/1308 - **NeoDesk Icons**
#801 - Label Printing Programs
#829 - Vanterm V3.8 - Shareware terminal program
#888 - *Atari ST Subjects* (Book) Programs
#926/1148 - Hard Disk Utilities
#991 - Label Printing for H.P. Deskjet & Avery 5260 Labels, Desktop Formatter, Disk Sector Edit.
#1000 - Spelling Checkers
#1008 - **ICONDESK** - Set up different looking icons
#1038/1039/1474/1475 - DC Desktop Icons
#1078 - Monitor Emulators
#1130/1332/1434 - DC P.O.W. Utilities - Disk full of handy utilities from Double Click Software.
#1143 - SLM Laser Printer Utilities
#1175/1176/1177 - Programming in Assembly (DBL)
#1214 - GFA Basic Programs/Files
#1261 - MIDI Music Maker V1.91 (DBL)
#1267 - Atari Advanced Hard Disk Utilities
#1300/1301 - *Atari ST Topics* (Book) Programs
#1304 - GFA Basic Utilities
#1305 - Gramslam Grammer Checker V3.20
#1306 - Hyperlink Demo (Hypercard) (1 Meg/DBL)
#1310 - Virus Killer Programs
#1319 - GFA Basic V2.0
#1322 - **KAOS DESK** - GEM Desktop Replacement
#1367 - Latest Supra Hard Disk Utilities (DBL)
#1370 - Stock Smart V3.2 - Stock charting program
#1400 - **ST Writer V4.5** - Simple, easy to use word processor with extensive documentation on disk. H.P. Deskjet Driver included.
#1420 - Super Boot V7.2 - All in one boot up utility
#1429 - Extensible Control Panel V1.0
#1441 - **Your Second GFA Basic 3.0 Manual**
#1442 - GFA Basic Compiler Sheller Plus V1.0
#1444 - Spellone V1.1 - Spell Check with dictionary
#1547 - Cocktail Selector (Clr), Recipe Box V3.1
#1478 - EZ Grade V2.04 Demo
#1479 - Payroll Expert V1.3 Demo
#1483 - Search Me - Puzzle Generator (Mono Only)
#1484 - STD CAT V5.0B - Catalog disks/partitions
#1485 - X Boot Demo
#1492 - Calligrapher Demo (1 Meg/DBL)
#1496 - First Graph Demo (1 Meg/Color)
#1498 - TT Utilities - Collection of useful utilities
#1499 - Super Boot V7.4 - All in one boot up utility
#1500 - **ST Writer V4.8** - Simple, easy to use word processor with extensive documentation on disk. H.P. Deskjet Driver included.
#1509 - Cal V6.2 - The calendar accessory
#1510 - Diamond Back V2.42 Demo
#1511 - ST Tools V1.9
#1519 - Vanterm V4.0 - Shareware terminal program
#1537 - Secrets of Flash - Sample files included
#1539 - Mouse Boot V3D
#1550 - Telebase V1.82 - Phone/FAX manager
#1568 - Stock Smart V4.0 Demo
#1580/1581 - **DB Writer V1.8** - Very well done word processor with a 40,000 word dictionary and a 30,000 word thesaurus included. (Requires 1 Meg/DBL/Mono)

Desktop Publishing

#737 - Calamus V1.09 Demo - Fully functional except for Save (Mono/1 Meg RAM/DBL)
#758/759/994/1150/1153/1179 - Calamus Fonts
#1190/1223/1329/1330/1331/1566 - Calamus Fonts
#935/1297/1516 - Desktop Publishing Utilities
#1028 - ***PageStream Font Editor V0.8***
#1266 - Silhouette V1.0 Demo (1 Meg/DBL/G-DOS)
#1297 - FP Print - Speeds up PageStream Output
#1348 - AVANT VECTOR V1.2 DEMO - A bit image vector tracer and vector grahics editor. From CodeHead Software (Mono Only)
#1365 - Arabesque Pro Demo (Mono/1 Meg/DBL)
#1427 - Calamus SL Demo (Mono/1 Meg/DBL)
#1436/1437 - Megapaint Pro Demo 4.0 (Mono/DBL)
#1438 - Genus Font Editor Demo for Calamus Fonts
#1461 - Easy Text V1.2: Budget Desktop Publisher

PageStream Fonts

#599 - Binner, Futura Black, Hal, Lubalin, Futura Extra Bold Condensed
#870 - Atari, Baby Teeth, Lucida, Old English
#1044 - Adverse, Barnum, Burlington, Oblique, Caligraphy 2, Celtic, Chancery, Chicago, Dingbat, Flash, Harloe, Olympia, Souvenir Medium, Souvenir Medium Italic
#1094 - Architect, Avant Guard, Bookman, Broadway, Chancery, Dingbat, Kibo, Oakville, Palatino, Western
#1336 - PageStream V2.1: Roosth, Saintf, Sansser, Sharkt, Style, Toulouse, Windsor, Zalesk

Adobe Type 1 Fonts

#1337 - Classica Heavy, Roman, Italic, Faustus Rhyolite Vertical, Sharktooth, Zaleski Caps
#1338 - Cascade Script, Kuenstler Script Black Albatross, Mediciscript
#1339 - Ashley, Miami Nights, Muriel, Park Haven Pixiefont, Playbill, Style, Toulouse
#1340 - Caraway Bold, Davys Ribbons, Dragonwick Eire, Goudymedieval, Pold Semiscript
#1341 - Flintstone, Franktimes, Helena, Griffin
#1342 - Caligula, Crillee, Greencaps, Inkwell Middleton, Rudelsberg, Wedgie
#1343 - Andromeda, Lower & Upper East Side
#1344 - Graphic Light, Manzanita, Nordic
#1356 - Albatross, Ambrocap, Dubiel, Dubiel Italic
#1358 - Alexandria, Civilite, Cracklingfire, El Garret Faustus, Laser London, Reynolds
#1557 - Aarcover, Adinekirnberg Script, Dobkin Script, Harrington, Medusa, Neuvarese Bold Italic, Romulous, Toulousecacitrec

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#1281 - ST Presidents
#1403 - Spelling: Object Recognition & spelling
#1424 - Math Facts V1.0, Spider Spell
#1491 - Rock, Paper, Scissors

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The typewriter's major functions are best described as individual items. The most important feature for my use is the ability to store preprinted form information in battery-backed RAM. On the forms I process most often, a 10-character/inch daisy wheel works best. But, one form requires a 12-character/inch wheel, so I've already ordered and received that item. A 10-character/inch Courier wheel was packed with the unit, along with a black, correctable ribbon, a lift-off correction tape and a lithium battery.

16KB RAM

Documents (along with their page format, character pitch and line spacing), phrases and page formats can be stored in memory. The typewriter is AC powered, but memory is battery secured. A portion of memory, 800 bytes, is devoted to correction memory, which contains the last 800 characters typed.

A note about recalling documents for printing. Save the page format for each document in a separate page format file. Then recall that page format just before inserting the page for printing. Do this because a document's page format is not in effect until the document is recalled. This precaution permits you to feed in the page to the correct starting position automatically.

55,000-Word Spelling Checker

The Canon ES23 does not correct spelling errors automatically, but the ES33 does. A 300-word user dictionary is also permitted. The default and maximum size is 3000 bytes. The size of the user dictionary can be decreased, a worthy option because the user dictionary consumes part of the available 16KB RAM.

14 CPS Bidirectional Printing

Unidirectional printing is not speced. (When will manufacturers learn that deliberate omissions are equivalent to lies?) Bidirectional printing can be used when printing stored documents that do not contain underlined text.

16 Character LCD

The liquid crystal display shows characters in a stored document or those being typed and various options in effect. The LCD contrast is adjustable. Although only 16 characters are shown, the key buffer holds 100 characters.

Carbon Copy Mode

There are two impact settings—minimum for onion skin or other thin papers and maximum for all other tasks. An overstrike mode can be activated to correct mistakes when typing multiple copies of a document.

Conclusions

If you're forced to power up the big gun for every piece of correspondence, or if preprinted forms are on your list of chores, you may want to take a look at newer versions of the "obsolete" typewriter. Atari users will feel right at home on something like the Canon ES23 electronic typewriter. By the way, you can keep both hands on the keyboard—there is no mouse.

Robert C. Arp, Jr.
Machine Specific Software
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Campbell, CA 95008
(408) 370-9039

MacSEE

Ron Hunt

MacSEE is a new program from Reeve Software for reading and writing to Macintosh or Spectre disks on an Atari ST. MacSEE evolved from another program called MacREAD, which has been placed in the public domain by its owner, Compu-Seller West. MacREAD had one purpose -- to allow copying files to an Atari ST disk from a Macintosh HFS volume. MacSEE goes beyond that and is also somewhat easier to use.

As anyone who has used an emulator on any computer can tell you, getting files transferred from one format to another can be a real pain. The problem is compounded by the fact that its usually new emulator users who most need to transfer files. Not only do you have to learn a completely new operating system, but you've also got to figure out how to move files between one system and another. Believe me, it can be confusing.

Translators

It's enough of a problem that Gadgets by Small includes its own translator utility, called Transverter, with the Spectre GCR Macintosh emulator. Transverter is a well written, fairly easy to use program. I've used it quite a bit and I've had very few complaints.

However, the one complaint that I and many others have had is that it can't read from or write to Macintosh HFS disks. Transverter forces you to create and use disks with the older MFS format. Add to that the fact that you need another special utility to create double-sided MFS disks and you can see we have the makings of a fairly good hassle.

MacSEE was created to provide a better, less complicated way to do the job. For the most part, it does this very well. That doesn't mean that it's perfect by any means, as we shall see.

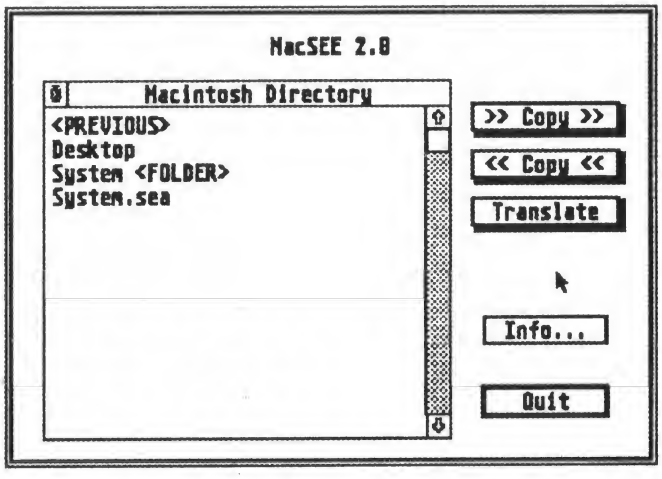
Copy Options

MacSEE can be run from either a floppy drive or copied to your hard drive and run from there. When run, it automatically scans your system for any Macintosh format hard disk partitions. It also looks for partitions created by Spectre and any Mac or Spectre format floppies that might be inserted.

If you're using a 1.44mb floppy drive, MacSEE allows you to read high density Macintosh floppies. If you have a Macintosh or Spectre formatted SyQuest cartridge drive, it will look there, too. As you can see, there are quite a few options open to you for moving files.

The Mechanics

After MacSEE has completed its scan, you are presented with a file selector box showing all of the Macintosh or Spectre format volumes it found. To open a volume, you simply click on its name in the selector. You are then presented with a root directory listing of all the files on that volume. You can navigate through folders in the same way. Just click on the folder name you happen to be interested in, and



it opens to display whatever files reside inside.

You can keep moving down through folders until you find just the file you're looking for. If you need to move back up to a previous folder level, all you need to do is click on the <PREVIOUS> entry at the top of the selector window.

If you want to copy a file from your Macintosh formatted disk to an ST disk, just click on the file to be copied to highlight it. Then click on the Translation button and click on the >>Copy>> button. You are then presented with a standard ST file selector box. Choose your destination path and click OK. That's it!

You'll find that MacSEE copies files very quickly. There's no waiting around here. Even the largest files take only a few seconds.

To copy ST files from an ST format disk to a Macintosh volume, you simply navigate to the desired Macintosh subdirectory, click on the Translate button, click on the <<Copy<< button and then select the file from your ST format disk that you wish copied. When you click on OK your file is copied.

There will be some times when you won't want to use the Translate button, which simply toggles MacBinary on and off. Generally, if the file you're copying from your ST has both a resource fork and a data fork (i.e., is a Macintosh file), you will want translation off. When translating Mac EPS files for use in PageStream, you also want to leave translation off. Otherwise, you should leave it on. If, however, you find that a file doesn't copy correctly with Translation turned on, you can toggle it off and try again.

Hands-On

In my testing, MacSEE generally performed as expected. With a couple of exceptions, there were no problems with floppy disk to floppy disk and floppy disk to hard disk transfers. Likewise, floppy to RAMdisk transfers worked fine.

However, it seems MacSEE can't read MFS formatted

disks. I know, the whole idea was to be able to get away from having to read MFS. Trouble is, many old-time Spectre users probably have at least a few MFS floppy disks laying around. Also, many of us had special partitions formatted on our hard disks and SyQuest cartridges just to handle MFS transfers. Not being able to handle MFS means many users will need to keep Transverter around for at least a little while longer. It's not a big thing, but it would have been nice if all Macintosh formats had been supported.

Also, it looks as if MacSEE has an upper limit to the size of the file you can transfer. While I don't know the exact size, it's somewhere around 500K. In multiple attempts to transfer some rather large archives, the files would only transfer over once they were broken into smaller archives. Ones that were around 480K seemed to go fine, but ones around 600K gave the error "Not able to add files to extent tree." After trimming a few files out of the oversized archives, they transferred just fine.

SyQuest Troubles

The next problem is a little more serious. It involves the popular SyQuest removeable cartridges. First of all, MacSEE doesn't seem to be able to read cartridges formatted using any version of Spectre prior to 3.0. It wouldn't read several cartridges I had formatted using Spectre version 2.65. It may also have a problem reading regular, fixed (hard) disks formatted using the earlier version, as well. Since I have updated my hard disk to use the newer formatting scheme, I couldn't verify this.

MacSEE had no problem reading Spectre 3.0 formatted cartridges. Likewise, it had no problems reading cartridges formatted on a PLI SyQuest drive connected to a Macintosh IIci. In fact, reading from cartridges seemed to work fine.

Writing to a SyQuest cartridge is another story. On two different occasions, I had the contents of a SyQuest cartridge scrambled while trying to transfer files onto the disk. In one case, I lost about 9mb of graphics files. The manual that comes with MacSEE cautions users to be sure to boot their ST with the SyQuest cartridge they plan to use for transfers in the drive. This I did on both occasions.

In each case, I was only able to transfer a few files to the cartridge before the computer locked with the SyQuest's busy light glowing. After waiting over fifteen minutes on the first occasion, I reluctantly hit the switch to kill the system. After that, the cartridge was unreadable. Actually, I couldn't even mount it on the Macintosh.

I tried using a freshly formatted cartridge with the same results. I could copy files from the cartridge to an ST floppy, hard drive or RAMdisk, but I couldn't copy files to the cartridge. In doing some research into this problem, I discovered that SyQuest drives are very picky about which drivers they are booted with.

Even on the Mac, SyQuest cartridges can get blown away if a previous cart using a different driver was booted in the drive. This is probably at least part of the reason for needing to boot the ST with the cartridge you want to use in the drive. Obviously, though, this doesn't completely solve the problem. At any rate, if you're planning on using MacSEE with SyQuest cartridges, I would advise caution. If you don't use SyQuest drives, you shouldn't have any problems at all.

In conclusion, MacSEE is a useful program for anyone who regularly needs to move files from a Macintosh or Spectre-equipped Atari to standard ST(e)/TT format disks. If used with floppy disks, hard disks or RAMdisks, the user should have no problems. If you wish to use the program with SyQuest cartridges, I would do so with caution. You will need to run your own test with your system to be sure that no incompatibilities exists.

PageStream 2.2

The Improvements at a Glance

Wayne Padgett

This review of PageStream V2.2 was written to meet Soft-Logik's requirement for the user group package recently received by the Salinas Valley Atari Computer Enthusiasts. This generous show of support to Atari user groups by Soft-Logik deserves the collective thanks of all Atari computer users.

This user group giveaway represents a huge demonstration of trust by Soft-Logik, and I for one hope all of the participating user groups reciprocate in kind by diligently protecting their PageStream user group materials.

PageStream version 2.2 contains many improvements and a few fixes. The changes, according to the manual addendum, number in the thousands. Covering all of the changes in PageStream 2.2 isn't practical, so I'll focus on the high utility changes that are either undocumented or are new in version 2.2. The important fixes will be apparent to all users of 2.1 and need no mention here.

The user group PageStream package is an off-the-shelf retail package, except that it is marked "Not For Resale User Group" and includes a demonstration program disk to allow group members to get a hands-on look at PageStream.

Macros and Draft Mode

Like many, I suspect, I was disappointed with the slow screen redraw and the macro problem with 2.1. The slow screen and the fact that I use macros quite a bit forced me to stay with PageStream 1.8.

Well, the macros work just fine now and Soft-Logik has addressed the slow screen redraw in 2.2 with a draft mode that reduces redraw time by about 31% overall. View level 4, Show Actual Size, was faster with my test page by 145% and view level 1, Show Facing Pages showed nearly no gain at only 4%.

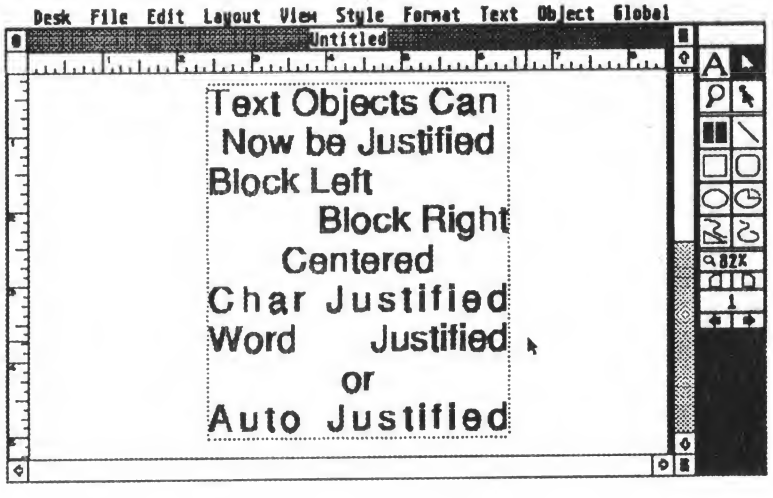
How, you may well ask, did I come up with that number? It was done by timing the period between the instant the next view level was keyed in until the moment the mouse pointer returned to view. The page, which was a good mix of text, IMG pictures and PageStream objects, was cycled through view modes 1 through 7. View 7, User Set Scale, was used twice. The two sets of nine timings were then totaled and compared. The individual redraw times ranged from 2 to 26 seconds in draft and from 4 to 26 seconds in normal mode.

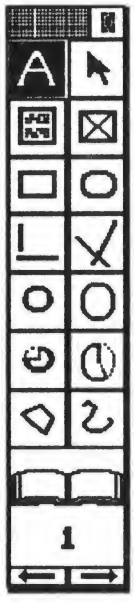
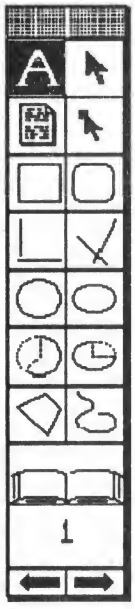
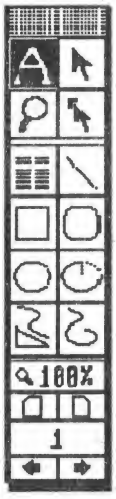
This isn't extensive laboratory testing by any stretch of the imagination, and times will certainly vary with page composition. But, this gives some indication of what you can expect from a stock Atari ST with a monochrome monitor.

CodeHead's Warp 9 doesn't seem to be a factor in screen redraws other than speeding the appearance of dialog boxes.

Soft-Logik's 2.2 Manual Addendum's comment on screen redraw makes it sound as though 2.2 should be "significantly" faster on "text rendering" than version 2.1 in normal mode. Timing tests between 2.1 and 2.2 using the same text-only document and the same nine magnification views set produced nine identical times. I even tried sending a block of text from EdHak to a window-size column in each PageStream version. The results were so close that it should be called a tie. While 2.2 was slightly faster, there was no time difference greater than 1.9 seconds! It is entirely possible that larger differences would show up using a 68030 processor or perhaps with Compugraphic fonts in use, but for the stock ST user and PageStream fonts, there is no perceptible gain in screen redraw speed. Faster screen updates are only achieved through the use of draft mode, and these are significantly faster.

Draft mode can be toggled on and off to get the best of both worlds. Draft on yields



speed for composition and off gives a more accurate screen presentation for the finishing touches. The draft mode's radio button is located under View in the Set Greeking dialog box.

New Tool Box

The new Tool Box is, by far, the most visible of all the changes. The Tool Box has been redesigned, and some new tools and capabilities have been added. The keyboard equivalents have also undergone some changes. These are not documented on either the "Quick Reference Card" or in the manual addendum and will be presented here.

The Magnifier tool allows point and click magnification of the work area by clicking at the center of the area to be enlarged. That spot then becomes the center of the screen and the view percentage is doubled with each mouse click (80% becomes 160%, 100% becomes 200%, etc.). Shift clicking reverses the process. The keyboard equivalent for the magnifier is [Esc]-[T]-[M].

The Reshape tool has a new icon and a new keyboard equivalent, [Esc]-[T]-[R]. Its function is unchanged.

The Column, Box, and Rounded box tools now have an added shift function. Drawing with any of these tools while pressing a shift key yields square forms and unshifted drawing allows rectangular shapes. The key equivalents for these tools are the same except for the Round Box tool which is now [Esc]-[T]-[1].

The Line, and XY Line tools have been combined and are simply called the Line tool. Unshifted drawing produces a line of any angle and pressing a shift key while drawing limits the line to horizontal, vertical or 45 degrees. The key command for this option is [Esc]-[T]-[L].

The Circle and Ellipse tools have been combined into the Ellipse tool and carries the new key equivalent [Esc]-[T]-[E]. Drawing with the left mouse button does an ellipse and shift left mouse button limits the shape to a circle.

The circular and elliptical Arc tools have been combined and are now the Arc tool. The new key equivalent is [Esc]-[T]-[A]. Selection of the arc style is made in the same way as the ellipse tool. The left mouse button allows elliptical arcs and shift left mouse button does the circular arcs.

A new icon sets off the "Polygon (Bezier Curve)" tool. This tool now has a shift feature, but it does not select the other drawing option as in the Arc and Ellipse tools. Using shift restricts line direction to vertical, horizontal or 45 degrees. Being able to draw perfectly vertical, horizontal or 45 degree lines with this tool is a real time saver when drawing polygons. Unless you were extremely careful during construction of a polygon with 1.8 or 2.1, you had to go back and work the jaggies out of the vertical and horizontal lines by eyeball and mouse, or the GEM option of selection and movement with the cursor keys. The ability to do perfect horizontal and vertical lines while drawing polygons is much easier. In all other respects, this tool is unchanged.

The View tool displays the current view percentage. Clicking on this icon brings up the Show/Set User Scale dialog box. Shift clicking on the icon will change the current value to the last used "User Scale" value. The keyboard equivalent for this tool is the same as the one for Show/Set User Scale in the View menu.

You have probably noticed that in each tool that has a shift option, the shifted draw mode produces the simpler of the shape options such as squares, circles, circular arcs, vertical, horizontal or 45 degree lines and so forth, while the unshifted option produces the more complex forms. Consistent command use makes it much easier for the user to remember how to select the tool variations.

A very welcome change comes in the entry line for the "Go To Page" dialog box. It now comes up empty rather than defaulting to page 1. No more ending up on page 51 when you wanted page 5.

Dialog Defaults

While we are on dialog defaults, the graphics import dialog now defaults to "Object" rather than "Picture Window." When I began using clip art, it was mostly DEGAS and Neo. Each picture usually contained several drawings, and you had to use the "Picture Window" in order to clip and crop the selected illustration. Most of the graphics I use now are individual IMG format, and since clipping isn't necessary, the "Object" option is used to import the graphic. This avoids another open window, as well as the clip process.

The object Duplicate dialog box now defaults to the last values entered after the first use. This is a big help when you are trying to precisely space several small objects inside a larger one or fit a set number of lines or objects on a page. Instead of having to remember your last entry, it comes up on the next duplication attempt and you can fine tune your numbers for a perfect fit! The XY Entry lines are now labled Horizontal and Vertical making things much easier for math boneheads like me. These changes give even more utility to an already powerful tool!

The "From" and "To" boxes in the print dialog box now default to the numbers of the first and last pages which contain objects. This change first appeared in V2.1 and is not, as far as I can tell, mentioned in the manual or the 2.2 addendum.

This may not mean much to you at first glance but, for me, this is what it does. I sometimes jump to a page well clear of the last page of my document to do layout on a small section. I do this because, with less to redraw, the work can be done faster on a clean page. If I remember to delete the page when I'm finished there is no problem. If I leave anything on that work page without deleting the page and then select "Print All," the program will print my document, print empty pages after the last page of what I want to print and then print my scratch page. This ranks right up there with the hasty punch in of the second page number in the "From To" box and hitting return without checking the numbers. Believing then that you are printing, let's say, from page 1 to page 3, you duck out for a snack and return to discover

you've printed the whole document and, as a bonus, the printer has advanced 25 or so blank pages onto the floor. Being able to see at a glance the total pages in a document, including any blank ones, is a welcome change, at least for me!

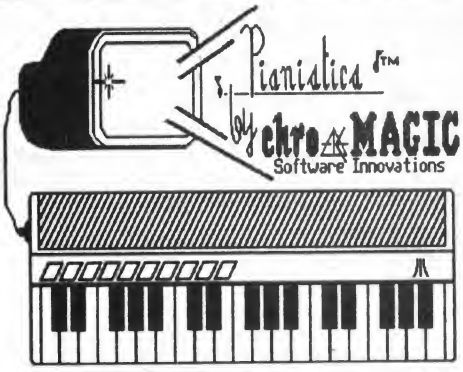
Changes and Additions

PageStream now imports more text and graphic formats than ever. Several import modules have been improved and there are five new ones. CVG and Arabesque are new graphic modules and the Calamus Text, That's Write and Calligrapher are the new text import modules.

Snap To Grid has been changed in V2.2. Now, as objects are drawn, they snap to the grid, assuming, of course, that Snap To Grid is selected. Formerly, the program waited for you to finish drawing before the object was snapped up.

Text object justification is now recognized and executed in 2.2. This will only have an effect on justified text objects from 2.1 that contain carriage returns and are then opened with 2.2. The solution is to apply justification to the text object by highlighting or selecting it and choosing the justification desired. As with many of the new features in PageStream V2.2, you have to use this one a few times to appreciate the possibilities. For me, text object justification, except for block left, now does automatically what had to be done manually in 2.1.

Arrow gadgets (like in the character and line spacing dialog, for instance) are also mentioned in the addendum. They function once, delay for a moment then advance rapidly. I tried them in 2.2 and they did just that. Then I tried them in 2.1 and they worked the same way. I thought this was just an addendum reminder of a 2.1 feature and deleted my original paragraph on this item.



Pianistics is a complete keyboard tutorial for the Atari ST that explains music theory, piano technique & improvisation. CHORDS: Inversions, subs, functions, voicings, arpeggios, and chord analysis. SCALES: Major, minor, jazz, rock, blues, ethnic, synthetic, and modes in all keys.

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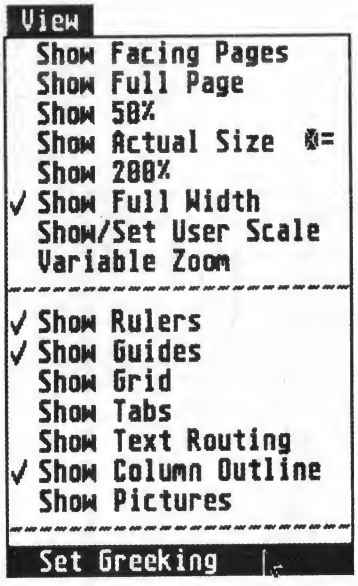
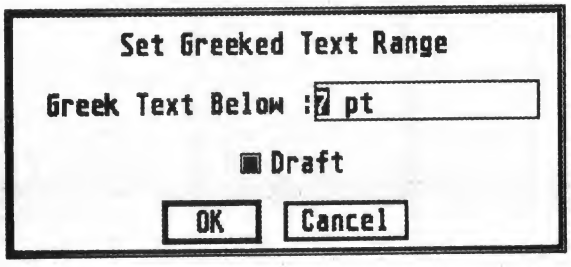




Meanwhile, I had done all the screen redraw timings on my Moniterm and thought that using an SM124 monochrome might yield some better numbers. I decided to run the timings on my TOS 1.4 equipped 1040 STf monochrome setup. Low and behold, the arrow gadgets ran wild and refused to behave. It was impossible to click to a setting and I had to escape the line to type in the value. My Mega ST also has TOS 1.4 and the arrow gadgets are very docile. Then it dawned on me that I'm running CodeHeads "Button Fix" on the Mega. I copied Button Fix to the 1040 STf system and loaded PageStream to check out my hunch. Voila! Now PageStream's arrow gadgets are well behaved and manageable on my 1040.

Conclusions

Soft-Logik's many improvements have made PageStream 2.2 more powerful than ever before. Many of the less obvious, but very functional, refinements serve to make the user more productive by reducing or simplifying his or her work.

PageStream 2.2 is a good step forward for an already fine production application. If you are using any earlier versions of PageStream, now is a good time to upgrade. Owners of 2.1 can upgrade free via modem or at your dealer, should you be so fortunate as to have one of those. Soft-Logik even offers an upgrade from any other Atari DTP package.

I enjoy using PageStream very much and hope you have picked up something useful from this review. Keep the faith and, by all means, support Atari software developers. They are the future of your Atari computer.

Publisher 2 ST

Sherry Mackiewicz

It came to me in a moment of desperation with a deadline. I had two hours in which to write the entire front page of the WAUG newsletter, print it out using STWriter, make headlines and subheadlines using DEGAS and print those out (since I needed them to be larger than the other text), and then cut it all out, paste it on a template, and pray to all entities that everything fit with just the right amount of white space. I needed a DeskTop Publishing program.

I considered PageStream very briefly. Buying it would be a major expense, and I couldn't justify the cost simply to make the newsletter and to play around with as a toy. Being that I am a cheapskate, Calamus, though wonderful, was also a foregone conclusion. Also, I only have a floppy-based system. While it might be possible, using either of those packages without a hard drive does not look easy. So, I went with Publisher 2 by GST (sold in North America by ABC-Solutions), which sells for around $140.

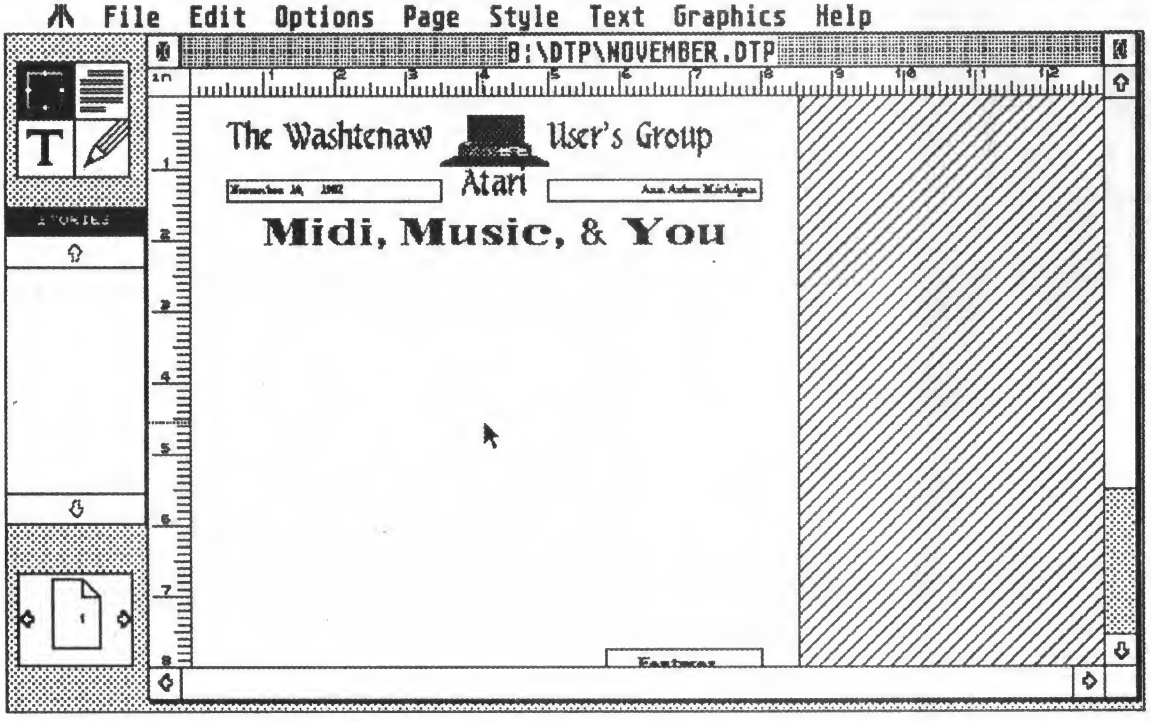
Installation

Installing Publisher 2 was simple enough. The program tells you everything you'll need for your individual set-up (one floppy drive, two floppies, or a hard disk), including how many blank, formatted disks you'll need. The only thing it would not do is format those floppies for you, like some other programs will.

After the installation, you must boot your system with GDOS and then run FONTWID.APP. You do not have to run this program again, unless you change the ASSIGN.SYS file (by adding fonts or you change printers/printer drivers). You do, of course, always have to load with GDOS. The directions warn you not to try to use Publisher 2 with FSM-GDOS, but they say nothing about using it with FontGDOS. I have read that the combination is possible, but after I tried this once and didn't get it to work, I gave up. Altering ASSIGN.SYS files isn't that difficult.

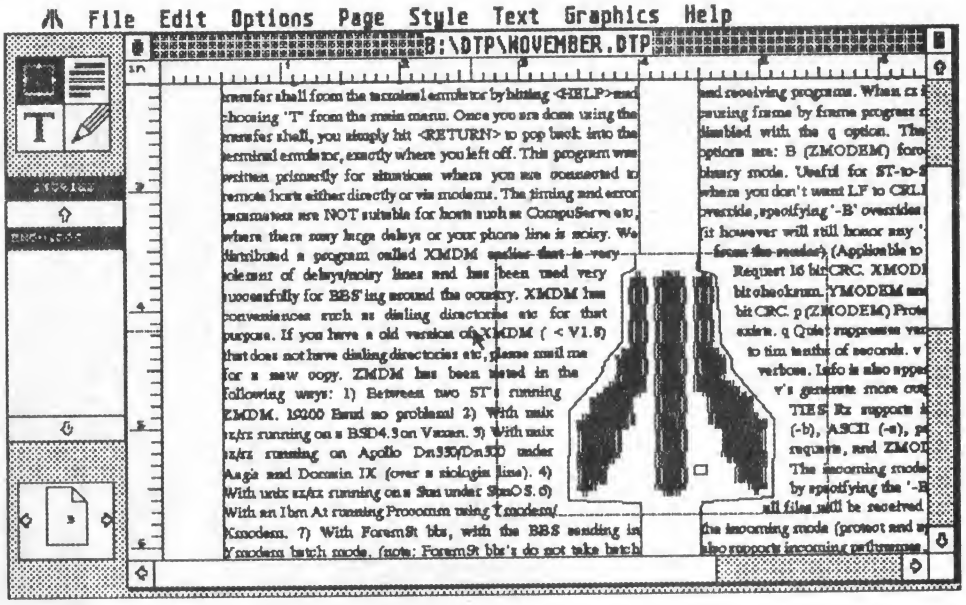
Frame Mode

Once Publisher 2 is loaded, you are automatically put into "frame" mode. Everything you put on a page has to be in a frame. You can define one frame at a time and put whatever belongs therein, or make frames all at



once and fill them in later. You can also move the frames around with the mouse, or by double-clicking on them. Double-clicking on frames gives you the exact positions and widths and lets you enter the correct values. There is an option to not show the frame outlines. This is useful when you have several overlapping (read messy) frames. Also, borders can be put around frames in several styles and weights (thicknesses).

The frame system is more user-friendly than some other programs. You can define as many columns as you wish. You can place pictures anywhere (even overlapping two or more columns), then redefine the frame edges and make text flow irregularly around the graphics. This is a refreshing switch from the last such program I used, in which text would flow only around a square. Publisher 2 allows complete layout freedom.

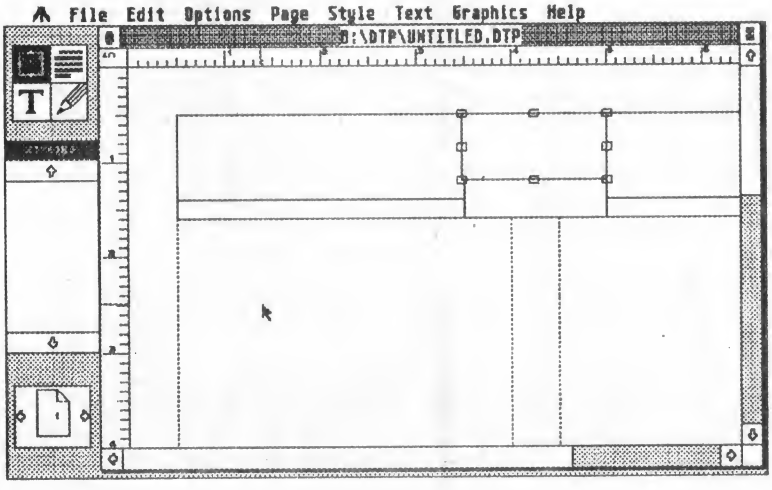


Other Modes

Publisher 2 has three other modes. Paragraph mode is used to set defaults for often-used text formats. For example, if your normal text paragraphs are set in Serif (Times) 12 point, you can set this option (and several others) here. To format an entire paragraph, simply click on it and then click on the style. You can also define your own styles and use function keys for setting them.

In Text mode, you can enter text and change the font and point size for entire blocks (which will override options set in paragraph mode). It is not a good idea to type in a wordy document in text mode, as entering characters frequently causes the screen to redraw completely. Large documents can be imported from most of the popular word processors.

Graphics mode is a bit misleading. You can use this mode to draw line art and pictures or to change existing pictures, but you do not use this mode to import a picture. Importing graphics is done in Frame mode, and graphics can be in DEGAS PI?, IFF, GEM, IMG and many other formats. (Another way to edit a picture is by using the Graphics menu, with choices available for scaling, cropping, and editing.)



Problems?

Now for the bad points. While moving around a document, the scroll bars sometimes "stick." This is taken care of by simply trying again.

Another thing that bothered me was the limitation of point sizes. Publisher 2 will only give you the point size installed in the ASSIGN.SYS file and its double. This is a problem with most GDOS-based packages, as GDOS fonts are not scalable outline fonts (which are supported by the still-yet-to-be-released FSM-GDOS/Speedo).

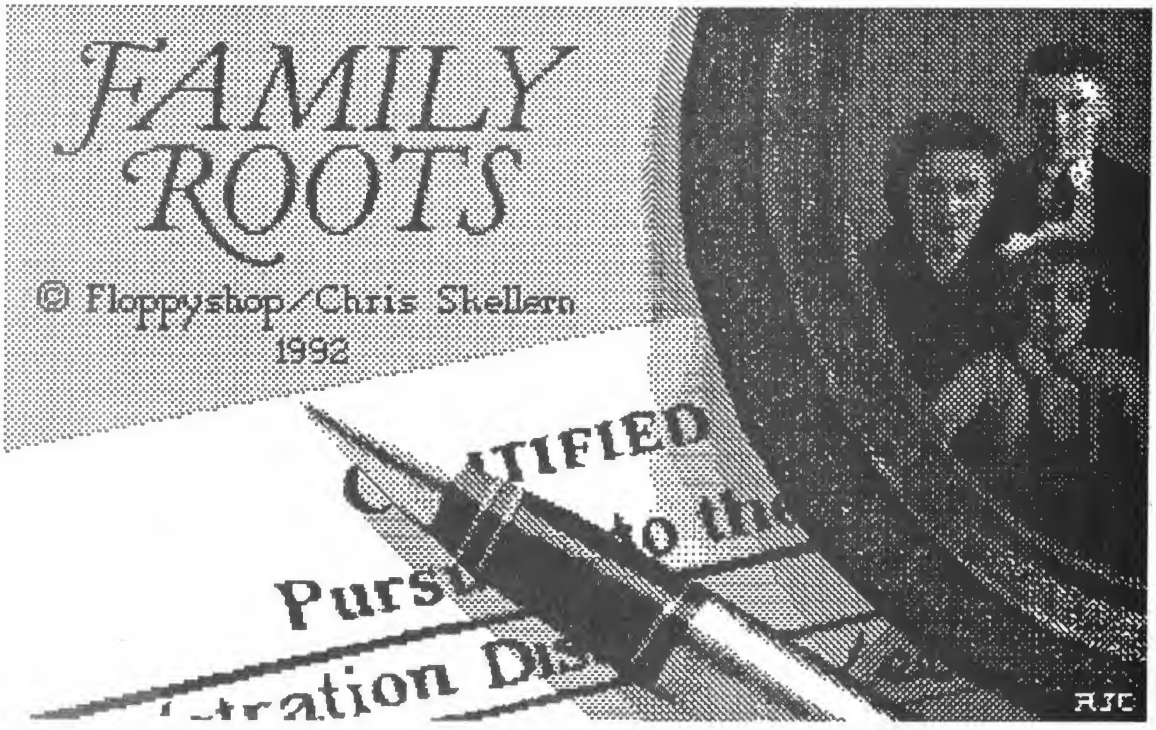
There also seems to be a limit on how many times you can crop a picture, causing problems for small graphics done in DEGAS. If this happens, you don't lose the graphic, but it needs to be reassigned to the frame and all the cropping needs to be redone. Also, DEGAS pictures are only imported in uncompressed format.

In addition, I got a few unexplained bombings during testing. (Just for the sake of completeness, I run Publisher 2 on an STe with 4 Megs of RAM, a Panasonic Multi-sync monitor and a KXP-1080i printer.)

Conclusions

Overall, Publisher 2 is a comprehensive, easy-to-use program. The tutorial included in the manual is very helpful, and extensive help is also available from within the program itself. Publisher 2 uses readily-available GDOS fonts, and you can install as many as you have disk space for (you'll probably have to delete a few of the eight fonts that come with the package). Screen redraws are fast, as is importing of pictures and text. Other handy features are automatic backup, manual kerning, both horizontal and vertical rulers, and style sheets for saving overall formats. To avoid crashes or other problems, the program always prompts for the correct disk to be put back in the drive.

If you only need a very good word processor, it is probably in your best interest to use WordUp or something similar. But if you are doing any documents with graphics or want something a little more professional (not to mention versatile) at a very good price, Publisher 2 is for you.



An ST Geneology Program from the UK

Evelyn Mills

Family Roots for the Atari ST/STE is ideal for anyone interested in recording their Family Tree. It is budget priced and has a database that is limited essentially by memory alone. To record family records, 1 meg of memory will take you back a good few generations -- enough for the most energetic of searchers! The system is easy to use and records can be amended at will.

The program (written in assembly) takes up a minimum amount of memory, is supplied on a single-sided disk and has a useful demo mode which should be run first to familiarize yourself with how the program works. This will save you a great deal of time and get you going within an hour. A well written manual is supplied on disk. There are 10 sections in the manual and any one of these may be printed separately -- a distinct asset for quick reference.

On auto load from drive A, the initial work screen appears. Here, all the demo data can be inspected by scrolling in all directions. An entire family tree can be represented graphically on the work screen, which acts as a sort of virtual grid. Your monitor offers a view to this grid that you can zoom in to or out from.

Note the four small boxes at the bottom righthand corner of the main screen labelled N B G and L S M. Effectively, these boxes act as a mini work bench, giving access to various screens.

Clicking the mouse on M (or pressing M on the keyboard) leads to the Preference/Options screen. This is the controlling work screen for handling text case, text display and simple flag settings to use as markers in relation to the tree. Three definable fields are available to the user. All drive definitions, saving and loading plus screen clearing options are handled here. Leave the AUTOLOAD option ON to ensure that all data will be loaded exactly as saved.

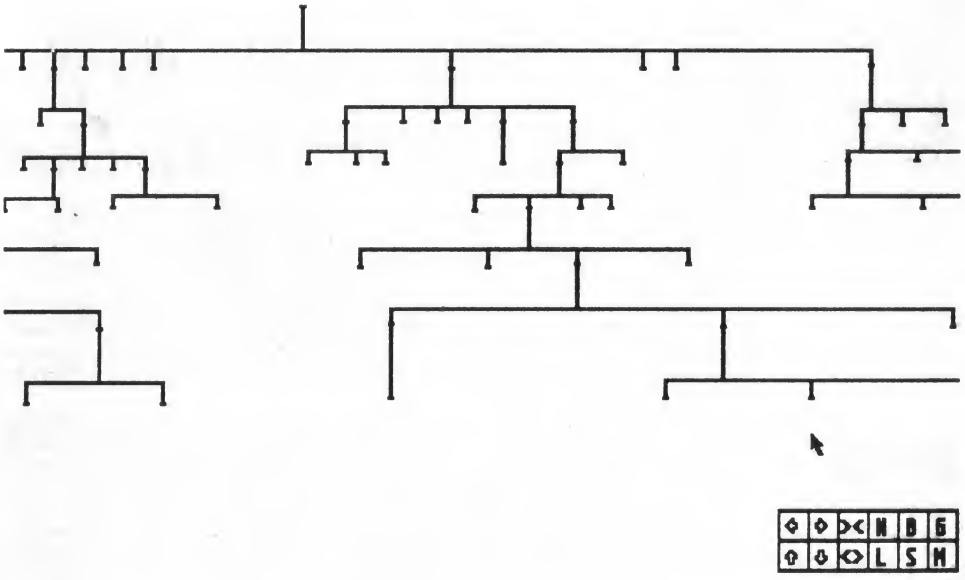
Should detailed information be required at any time, you can press I to access the Family Roots manual from within the program.

Creating Records

The rectangles and design of the tree itself are related to and interactive with the data screen. Pressing or clicking N creates a rectangle which may be sized and placed anywhere on screen with the mouse. Clicking inside this rectangle accesses the database screen. You then type in a surname and press return and that will now be shown in the rectangle. Further information relevant to this person will automatically be entered in the rectangle when entered on the data screen. Pressing or clicking N a second time creates a new rectangle associated with a new record and a new individual.

A complete family tree may be built up in bits and pieces and rearranged in logical order as required. You use the grid option (press or click G) to keep the horizontal boxes aligned. Family Roots is a leisurely program -- you can play around with any part of the family tree irrespective of sequence, and sort or amend the whole thing at a later date.

The block function (press or click B) is essential for printing purposes. You can define a block around any desired rectangle(s) with the mouse. Then, you can click on the PRINTER box, set the parameters and print details of the family tree or part thereof -- different fonts may be imported if required. A graphic called TREE is saved in DEGAS format and text files are saved as ASCII -- these can be tidied up a bit, otherwise a fair yardage of paper will be used in direct printing of tree data!



Cross References

Family Roots' cross referencing ability is excellent. Relationships between relatives are quickly accessed. The search option has its own screen and allows a search of the WHOLE file in memory. Short cuts are also permissible for unknown values. If birth dates are entered as ?/?/184?, ofr instance, a search will be forced between 1840 and 1849. If you've forgotten a name, you can use the wildcard facility to type in, for example, 'd*' and Family Roots searches for all forename entries beginning with D. A more selective way is to type the first three letters. Wildcard searching also applies to town of birth. If you really want to get into a proper search, then use the Identification Code facility.

There is a lot more hidden within this program. You can shrink or enlarge the whole family tree, move the boxes around at leisure, link families together and alter or update information as required. The manual is very clear, the problems are few -- most of the work is associated in tracing your ancestors, as it should be.

Family Roots is available for only £24.95 and comes in a plastic folder to keep postal rates low. It's available from FloppyShop, PO Box 273, Aberdeen, Scotland, AB1 8SJ, UK.

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Gadgets by Small Update

Dave Small

February 6, 1993—Hiya, folks. I wanted to let you know "I'm baaaack."

There have been some complaints about Gadgets (and sort of, about me) not being available. I plead guilty, but with extenuating circumstances. I am certainly not as available online or by phone/fax as I was two years ago, and there are reasons.

First off, we're trying to get Spectre 3.1 out the door. I spent time in Oregon last December getting this tuned up (we had DMA troubles with the TT). Spectre 3.1 now understands TT SCSI hard disks and can handle the AHDI/HDX 3 and above "XGM" partition scheme, which was causing users problems. You can convert partitions on SCSI drives to HFS or MFS, just as with ACSI, and no problems. (Working this into XGM cost an extra couple of days, not fun.)

As a lot of you know, 1992 was not much fun for the Smalls in general, not just Gadgets. Ten-year-old Eric was hit by a car and broke his upper leg, which is one of those bones you don't want to break. The bone also tore up his thigh muscles. He had to have a steel rod put into his thigh to hold the multiple pieces together; it took the surgeon an extra hour to line them up. (Gee, that'll be a fun thing to read after dinner.) This happened in May '92. He attended graduation in a 4-legged "walker."

We shut down Gadgets completely over summer 1992. I mean nobody, but nobody, got answered on anything. The reason was we were working with Eric on physical therapy; we didn't want him to have a short or weak leg the rest of his life. My wife begged off on PT; she had been through it twice with knee surgery and knew how much it hurt. So, I got to do it. I also got to sleep around Eric when he'd wake up with muscle spasms, and they hurt quite badly. This went on all summer, and the closest analogy is a new baby in the house that's real fussy—every 2 hours.

It turned out well. Eric calls himself "The Terminator" now and points out that bullets would bounce off his steel leg. (By the time you see this, he probably has had the pin removed, oh joy.) He went back to school in September with no walker, bouncing around, rough-housing with the kids, running up and down the stairs. It is incredible how fast 10-year-olds can heal.

In the meantime, some folks that wanted to get ahold of us were rather peeved. We made up a FAX sheet and sent it out in general (ST-Report quoted it) to our dealers, explaining what had happened. We even scanned in the X-rays of Eric's leg, which are real graphic. (Definitely worse than the start of "Basic Instinct"). And we discovered we were four months behind in FAXes and telecalls and so forth, and our input buffer was getting swamped.

The input is pretty overwhelming. People set autodialers to work on us, so the minute I complete a call and put the receiver down, the phone rings. No hesitation. The FAX volume is just unreal. I'm positive we have lost FAXes in the overall overload.

We've been trying to find some help, and with all the aerospace layoffs in Denver, maybe we will succeed. I've talked with four people so far that did not feel right to me; a telephone person is your whole contact with your customer. You don't want an engineering-type doing it. In the meantime, we answer the phone and ship to dealers when we can, particularly when Sandy is sick of taxes or I'm wasted on Spectre 3.1. (The recent, most embarrassing bug was to find out the hard disk write command was changed into a read accidentally; this is surprisingly hard to discover after the avalanche crash it caused.)

My attitude is that I would rather make X thousand customers happy than one person happy, by NOT answering the phone and wrapping up 3.1, getting it through Beta, and OUT, so TT users can start using SCSI drives. (Spectre 3.1 does not, yet, allow generic SCSI, that is another issue; we are "special-casing" disk I/O.) Spectre 3.1 also has some long-wanted bug fixes, like the MegaSTe with less than 4mb RAM fix and the greater than 4mb fix for TTs. I am having a lot of fun with big memory in general and the MMU. I have to provide a secure ST RAM disk I/O and screen buffer, and the COMBINATIONS are giving me flak. (The TT, for instance, has that big screen monitor which uses up so much more RAM than the STs 32K...I have to allow for it in ST RAM).

Spectre 3.1 is essentially ready for Beta test once I get done wiring up the Mac-required device table stuff. ("Gee, is a hard drive ejectable?") It is headed for Beta test, probably on GEnie to begin with, but that is not a restriction to there. I DEFINITELY want to test out one thing at a time, so I don't get combination errors. Big memory combos in particular have WEIRD bugs. For instance, Mac programs often compress the heap by requesting 8mb of memory. The request fails, but the heap compresses. Well, with a TT and GeSoft board (or with SST), we can actually have 12 megs, so...the request works. WHAM!

The Mac is also "24-bit dirty," meaning it uses the upper 8 bits (like older GFA Basic) for flags. This means an MMU has to watch it to keep from crashing. This is real fun when people are promising to put 68EC030 chips into the ST, where there IS NO MMU, and where I don't know a way to lock all 256 "groups" of 16 meg ST-size pages into one. The manufacturers of these boards say it is no problem to run Spectre; I have absolutely no idea how it could work with 3.1. We have long put out an advisory on this, but it is, shall we say, in the interests of an EC030 board maker to contradict us.

As for patching our code to kill caches, Spectre is real touchy about being patched, on purpose, because of the Dr. Typo dweeb that made a pirate version—and wiped out the boot sector of most machines it ran on. (He was 2 bytes off on a patch, and fell into disk write code with D0 = 0 = absolute sector # = partition sector.) This totally blew away the hard disk for most folk.

So, we know we are too hard to get ahold of. I presently have 130 messages in my email buffer on the Well. That's truly scary, especially with the "bounce percentage" I get of replies that fail. Oh, well. There are hundreds more on GEnie and so forth. But Spectre 3.1 is pretty well done, and it was a lot of work. [We are debating putting in Sparrow...oopps...Falcon support for IDE and Sparrow SCSI, which is TOTALLY different than TT SCSI (beware!), but I'd like a seperate revision for that. The IDE and SpSCSI code seems straightforward.]

I expect that when we finally find the right frontend person (I just hate to call people buffers), things will ease up, and we can all get back to our proper jobs. We did manage to ship a whole bunch of SSTs in the one year its been out, and MegaTalk is out as well. Both of those involved extensive coding and writing of manuals.

I'll let everyone know when Spectre 3.1 is through Beta and solid. I don't want to high-speed timing screw up SCSI drives. Some do it, believe me. We're trying to make the code CPU speed independent, so all those 150 Mhz accelerators will work. (grin)

Okay, back to discussing the real issues of the day: Whether a PC is a better buy than a Falcon—surely the most apples to oranges question I've seen. Oh, yes. We finally whacked through the System 7 thingo that caused so much trouble. But that's news for another time.

Hang in there, folks. At the end of 1992, at midnight, we re-formatted a disk labelled "1992." That is our comment on the whole blasted year. Hopefully, 1993 will be an improvement; nice and dull would be GREAT!

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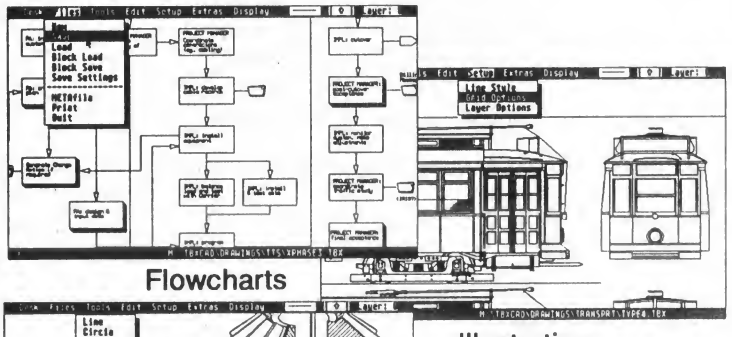
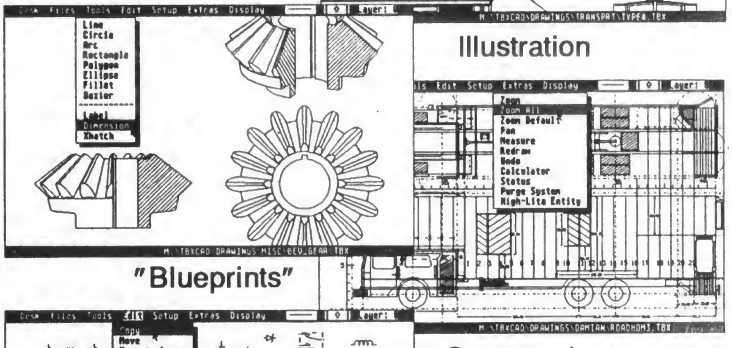
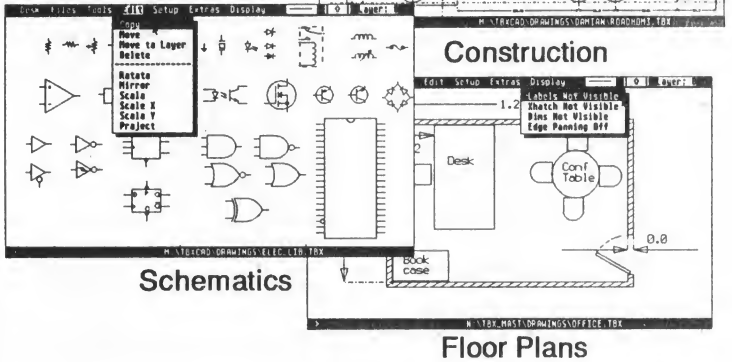


Flowcharts



Illustration

"Blueprints"



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Writing a Bulletin Board on the Atari 8-Bit, Part 4

James Bastable (BaPAUG)

Xmodem is a standard protocol used in most communications programs for the uploading and downloading of files, be they text or binary programs. Because the telephone line has a tendency to corrupt data due to 'line noise', such a protocol is essential.

Xmodem is very simple to use and to program into a Bulletin Board. The Xmodem protocol is simplicity itself, although it can never be said to be the fastest way of transferring data.

There are many variations of Xmodem, and all boast different features and different degrees of reliability. I have used Standard Xmodem for over eight years now and can honestly say I have never had a failure that was not detected by the protocol.

Xmodem Blocks

When sending or receiving using Xmodem, the data is split up into blocks of 128 bytes. Each block is transferred one at a time along with three bytes on the front end to signify the start of a block and the number of the block being sent. At the end of a block, a one byte calculated Checksum figure is sent which is used to check the accuracy of the data transferred.

A typical block of data will look like this:

<SOH><BLOCK><255-BLOCK><128 BYTES OF DATA><CHECKSUM>

An SOH (Start of Header) is ASCII character 1 and is always sent at the very beginning of a Block.

BLOCK is the actual number of the Block sent. The first block would have this equal 1, the second would equal 2 and so on. When the BLOCK number reaches 255, the value is wrapped around to 0 and not to a 1 as you might expect.

The third byte (255-BLOCK) is sent to confirm the Block number (BLOCK) previously sent.

Following on from these three bytes, the 128 bytes of actual raw data is sent.

The last byte to be sent is the CHECKSUM, which is calculated by adding together ALL the previous bytes sent and the low byte of this value is calculated as the checksum. This can be expressed as a formula:

CHECKSUM=X-INT(X/256)*256

Where X equals the total of all the previous bytes added together, including the SOH, BLOCK and the 255-BLOCK. As a matter of interest, Atari BASIC can calculate this Checksum far more easily, like this:

CHECKSUM=ASC(CHR$(X))

This places the low byte of X (total bytes added together) into the variable CHECKSUM.

Xmodem Sample

There are many other factors we have to consider when transferring data. The best way to do this is to discuss a sample program line by line and highlight the areas that need expanding. Here I will discuss the various elements of the accompanying program (found at the end of this article). Once again, it is not necessary to type in the program as it only serves as an example.

LINE 70 Sets the values of the variable that are to be used. BLK stores the Block Number being sent. TRY records the amount of attempts that will be made to send a Block before aborting. NAK holds the ASCII value 21 which is used in two ways -- one to indicate that the program is ready to receive data and one to indicate that the Block received was not correct. ACK holds the ASCII value 6 which is used to indicate that the Block received is correct. CAN holds the ASCII value 24 which is used when a transfer is to be aborted.

LINE 80 sets more variables. SOH is set to ASCII 1 which is always sent at the beginning of a Block. CHK is set to 0 and will be used to store the yet to be calculated CHECKSUM value sent at the end of a Block. FLAG is set to NAK and will be used to indicate the condition of the transfer to the program. A$ is DIMensioned to 128, the amount of Data that will be received in any one Block. BUF$ is used to store the correct Data once it has been received.

LINE 90 is the start of the transfer program Loop and will always check the amount of attempts that have been made when transferring a Block of data. Standard Xmodem will always abort if a Block is received or sent more than 10 times. If the Block is incorrectly received more than 10 times, FLAG is set to CAN (ASCII 24). This tells the sending computer that too many attempts have been made and that the line must be so bad that Xmodem transfer is unsuitable at present.

LINE 100 PUTs a byte to the RS232. The first time around, this will be a NAK, which indicates that the program is ready to receive. FLAG was set to NAK in line 80. From now on, FLAG will either contain an ACK if the Block was received correctly or a NAK if not (or CAN if transfer is cancelled).

LINE 110 checks to see whether FLAG was set to CAN. If so, the transfer should be aborted.

LINE 120 gets the first byte of data being sent. This should obviously be an SOH (ASCII 1). CHK is set to the value of the first byte received and FLAG is set to ACK in preparation of receiving the Block correctly.

LINE 130 checks to see whether the byte received is a CAN (24), which tells the program whether the data being sent has been aborted or not by the caller.

I actually check this twice when I program Xmodem for my own use, and a lot of software is adopting this double check. It is possible that line noise over the telephone link could corrupt incoming data to the degree that a byte could be changed to a 24, forcing the program to abort unexpectedly. If you do adopt this method, you should also send CAN twice when actually aborting. In this case, Line 130 would read: IF X=CAN THEN GET #1,X:IF X=CAN THEN REM *ABORTED*

LINE 140 checks to see whether the first byte received was an SOH and if not sets FLAG to a NAK, which tell the program that the data received was corrupt. FLAG will eventually be sent out to indicate if the block was received correctly or not.

LINE 150 GETs the second byte which should contain the block number. This Value is added to CHK.

LINE 160 checks to see whether the value received corresponds to the program's record of the Block being received and sets FLAG accordingly.

LINE 170 GETs the third byte, which

should contain 255 minus the Block number. This value is also added to CHK.

LINE 180 checks this value and sets FLAG.

LINE 190 is the start of the loop which GETs 128 bytes of data.

LINE 200 GETs the ASCII value of the data and adds it into the string A$.

LINE 210 adds the value to CHK.

LINE 220 ends the loop.

LINE 230 GETs the last byte of the Block. This value should be the calculated Checksum from the sender.

LINE 240 calculates the low byte from CHK and places it in the variable CHECKSUM.

LINE 250 compares the Checksum received with the Checksum calculated from the data received. If these values do not agree, then it is assumed that the data received was corrupt and FLAG is set to NAK.

LINE 260 checks whether FLAG equals a NAK, which would mean that some part of the data received was incorrect. If so, TRY is incremented and the program is forced back to line 90 where another attempt is made to receive the data.

If LINE 270 is reached, the data received must be correct. BLK is incremented, as the program will now attempt the next Block of data.

LINE 280 places the contents of A$ into BUF$ where it is stored for transferring to disk later.

In LINE 290, TRY is set to 1 to start receiving a new data block and the program is forced to line 90 to restart the Xmodem loop.

This program should explain the basics of Xmodem transfer, but it is up to you, the programmer, to check for other errors that may occur.

```
10 REM ------------------------------
20 REM -EXAMPLE XMODEM RECEIVE ROUTINE-
30 REM -ASSUMING THAT CHANNEL #1 IS
40 REM -OPEN TO RS232 IN CONCURRENT
50 REM -MODE.
60 REM ------------------------------
70 BLK=1:TRY=1:NAK=21:ACK=6:CAN=24
80 SOH=1:CHK=0:FLAG=NAK:DIM A$(128),BUF$(1500)
90 IF TRY>10 THEN FLAG=CAN:REM *ABORTED*
100 PUT #1,FLAG
110 IF FLAG=CAN THEN REM *ABORT TRANSFER*
120 GET #1,X:CHK=X:FLAG=ACK
130 IF X=CAN THEN REM *ABORTED*
140 IF X<>SOH THEN FLAG=NAK:REM BAD BLOCK
150 GET #1,X:CHK=CHK+X
160 IF X<>BLK THEN FLAG=NAK:REM BAD BLOCK
170 GET #1,X:CHK=CHK+X
180 IF X<>255-BLK THEN FLAG=NAK:REM BAD BLOCK
190 FOR LP=1 TO 128
200 GET #1,X:A$(LP,LP)=CHR$(X)
210 CHK=CHK+X
220 NEXT LP
230 GET #1,X
240 CHECKSUM=ASC(CHR$(CHK))
250 IF X<>CHK THEN FLAG=NAK:REM BAD CHECKSUM
260 IF FLAG=NAK THEN TRY=TRY+1:GOTO 90
270 BLK=BLK+1:REM ALL WENT WELL
280 BUF$(LEN(BUF$)+1)=A$
290 TRY=1:GOTO 90
```

Data Corruption

The most common data corruption that must be checked for is that of line noise causing a Block to be shorter than it should be. If you were to use the illustrated program as it stands, a short block would cause the program to hang up.

As with any Bulletin Board program, all GET operations must be within a loop which checks (by PEEKing location 747) whether there is any actual data to be gotten. If, after about a minute, your Xmodem program has not received any data, two things should happen. First, the RS232 must be checked to see whether the caller has dropped carrier. Second, if the caller is still there, a NAK must be sent to indicate that a short block has been received.

Another point to watch out for is when line noise causes too many data bytes to be sent. Although this may not cause a problem when a data block is received correctly, it may effect the following data block. To be sure, I always close the RS232 channel to clear the buffer whenever I receive a bad Data Block. That way the next block is not effected by any corruption overspilled from the previous bad block. Any overspill from a previously received correct block (i.e., corrupt data added to the end) should not really cause too much concern.

Other Concerns

Whenever you are transferring data in this way, you must remember to set your RS232 port to NO TRANSLATION by using the XIO command 38. The last thing you want when using Xmodem (or any protocol for that matter) is to have the RS232 altering the data that is being received or transmitted.

One final point that you may, or may not, have thought about is what to do when the amount of data you want to transmit is not divisible exactly by 128. Obviously, the answer is to add extra bytes to the end. The question is what byte value should be added?

I have experimented with many byte values and most seem to cause problems when the file being transmitted is a program (some DOSes object to extra bytes tagged onto a program). In my experience, the safest answer is to check what the value is of the last byte of data to be transmitted and append this value. This method appears to be agreeable to most computer systems, in particular the Atari 8-bit. Another option is to pad the last block with ASCII 26 (Control-Z), which is the standard End of File character.

As I said before, standard Xmodem is reliable for most purposes and certainly when transferring data at speeds of 2400 baud and below. On my Bulletin Board, I have not installed any other file transfer protocol and have not as yet found it necessary to do otherwise. Maybe, this will change when higher speed modems become more widely used, but for the time being Xmodem will do very nicely.

Endings

This concludes my series of articles to assist you with writing a Bulletin Board. I hope some of you will at least attempt it, as I have gained many months of satisfaction from the challenge. The Atari 8-bit is not supported as well as it could be with Bulletin Boards and, I'm sure, more Bulletin Boards for the 8-bit Atari can only do good.

The subjects I have not touched on -- like the message base and menu manipulation -- will have to be programmed by you. I can be contacted via my bulletin board (The City) at 011 (021)353-5486 at speeds of 300, 1200/75, 1200/1200 and 2400/2400 baud (and still using BASIC).

ColorDump 1.03

Robert Ely (JACS)

Over the past two years, our club has been receiving AIM. This isn't the first article any of our members have had published, but it is a first for me. I do write for our newsletter and some of you may have seen my name or handle on the BBS networks or even GEnie.

As a member of a somewhat active Atari user group, I feel it is my duty to do whatever I can to keep the Atari computers alive. I am one of those die-hard 8-bitters. I guess someday I'll move to a bigger machine, but for now, I'm having too much fun with my 130XE. I like to program, and have since 1982, starting first with Atari BASIC, then moving to BASIC XL and finally to BASIC XE (both from OSS, now ICD).

Four-Color Printing

What I am writing about here is one of the programs that I have written and you might enjoy. It is called ColorDump. This is a program to print color pictures on a 24-pin Epson-compatible color printer. This isn't just a color print program; it actually does full four-color mixing. This is the type of printing that makes the color pictures in your local newspaper or magazine. The resolution isn't nearly as good, but the process is similar.

ColrDump v1.03 uses four Graphics 9 images to create a final composite picture. If you are familiar with Jeff Potter's Color View program, you should already understand the concept and basic mechanics of this process. Anyway, ColrDump need four images, while Colrview uses three. The fourth image is a black or gray field image created from the other three images and is used for contrast in the final print. In the technical jargon of the printing world, the black image is used as a "mask."

Colrview uses three light-additive mixing images -- one each of red, green and blue. ColrDump takes these three images and prints them using subtractive color mixing.

Color Theory

Additive color mixing is a process of adding the luminance values of greatly differing hues of the light spectrum. Red is the lowest in the spectrum, green is in the middle and blue is the highest frequency hue. With these three colors, virtually any color between the highest and lowest viewable colors can be created. When equal amounts of luminance energy of each of the three hues is mixed, white light is the result. By varying the total luminance, various shades of grey result. If any of the three hues has a different amount of energy, greater or lesser than the others, a new hue is created. This can be proven through vector math, but is beyond the scope of this article.

Subtractive mixing, on the other hand, works in an opposite but similar way. The resulting color you see is what is left over after an object has absorbed some of the light. To mix colors for a given result, you still need three colors of greatly different frequencies. In this case, they are yellow, cyan and magenta. Mixing all three in equal amounts results in a grayscale opposite to the additive process. A maximum mix results in black and, therefore, all of the light is absorbed.

This was the biggest problem in creating this program. The first version gave me a color picture, but the colors were all off and there was a definite lack of contrast. The contrast problem was a matter of making the dot patterns a little less dense. The color was another story. If it weren't for a book on color TV engineering that my father had, I'd still have the poor color.

A Little History

ColrDump was born out of a program I wrote a few years ago to print normal Graphics 9 pictures on my Panasonic 9-pin dot matrix printer. I wanted a program written in BASIC that could be easily modified to fit whatever purpose I needed. The magazines had programs to print Micropainter pictures, which did a nice job, but they had machine language sub-routines, that, at the time, I didn't understand. I felt this could be done in BASIC, so I got the fever to do it myself.

The first version of ColrDump took me about two weeks to hack out, in a reasonable form, but it was a bit crude. It was written in BASIC XE and used the upper 64K of my 130XE for program space and the lower for variables and the three images.

Latest Update

The color is really nice now, there is plenty of contrast, the menus look nice, and I even got it to work on a stock 64K machine with BASIC XL. Version 1.03 now only loads one line at a time from each image into memory, hence saving mucho space. The speed hasn't suffered, at least not that I noticed.

Version 1.03 now requires the fourth image, mentioned earlier, to print a black image. The fourth image has an extension of .K. If the file doesn't exist when ColrDump is told to print, the program generates the file automagically. It's a good idea to be sure there is at least 8K of disk space before printing, just in case the .K files aren't on the disk. This will, more than likely, be the case, when you first get the ARChived file set. I have included a few of them for readily available RGB file sets, so you can begin printing right away. There is also a full 4096 color file set in the ARChive. [Ed. Note: This program appeared on the November '92 AIM 8-bit Disk of the Month.]

Notes

I used a Star NX-2420 Rainbow printer to test the code. ColrDump uses 16 redefined characters as dot patterns to represent the luminance values in the RGB Colrview images. Be sure your printer is set up to receive the character data. A four-color ribbon is used to print the colors.

ColrDump prints one image color line, switches to the next image and prints the same line for that image. Be aware, this process takes lots of time, but the results are worth the wait. I suggest you start the printing process, then watch a football game or a good movie. The slowness is NOT the program. It actually runs much faster than the printer can do its job. A very fast printer like the NEC P960-XL (a $900+ printer) would probably print the image in about half the time. But hey, what do you want from a $300 printer?

One other note about the program is that it uses six of the seven IOCB channels while printing. If you use Atari DOS 2.x, POKE 1801,6 from BASIC, then go to DOS and rewrite the DOS files (menu item H) to disk. SpartaDOS X users can set this up in the CONFIG.SYS file by typing DEVICE SPARTA ,6. (A sample CONFIG.SYS file is included in the pro-

gram's release ARChive.) I'm not sure about MyDOS.

ColrDump v1.03 uses the XIO version of the Atari BASIC POINT command to keep data gathering among the four image files at the same place within each file. This should work on all 64K systems regardless of DOS type, as it is part of BASIC XL. It is used as a file pointer offset from the beginning of the file. This allows you to use the files from any disk without any kind of index reference file.

I also made use of the BGET command, which is extremely fast for getting data from the disk. Check out the [V]iew an image option to see what I mean. The image are not kept in memory with this version. If you have a RAMdisk, by all means use it, as this version is very disk intensive! I tried it from both RAMdisk and floppy. There is little speed difference, but the floppy is constantly in use.

Features

Here are the features of ColrDump v 1.03. On the main menu, you have the following functions:

[C]hange filespec
[D]irectory in drive n
[E]xit to BASIC XL
[G]enerate black file
[M]irror normal print
[N]egative print
[P]rint normal
[Q]uit to DOS
[R]everse/neg print
[V]iew an image

Change filespec lets you change the drive number and enter the name of the RGBK files you wish to view and/or print.

Use the directory command to show you a directory of the currently selected disk. Unless you have used SpartaDOS or MyDOS, and have set a working subdirectory with the CD command before entering ColrDump, you will only see the root directory listing.

View an image allows you to display on-screen one of the four pictures in a normal Graphics 9 mode. To return to the main menu, simply press the [Esc] key. You select the image to view by its image print number, as detailed below.

0 = blue image and prints with the yellow ribbon
1 = green image and prints with the red (magenta) ribbon
2 = red image and prints with the blue (cyan) ribbon
3 = black image and prints with the black ribbon

There are a number of print options available. Print Normal pretty much does what you'd expect, and will probably be the way you print most of your pictures. Negative Print prints the picture as a negative. Mirror Print outputs a left-to-right flipped image of the original as a normal, positive picture. Finally, Reverse/Neg. Print prints a left-to-right flipped image as a negative, combining the M and N print funtions.

The other menu options are pretty much self explanatory.

Future Additions

I'm working on v1.04, which will allow four-color printing on either a 9-pin Epson compatible dot matrix printer, a 24-pin monochrome printer or the 24-pin as this version does. The big difference is the 9-pin and 24-pin monochrome versions will print a full image before a color change. This is due to the fact that there aren't many (any that I know of) 4-color 9-pin printers and few 24-pin monochrome printers out there. For the monochrome printers, you will need to buy red, yellow and blue ribbons separately. The program will tell you what to do and will help you to register the colors, ala PrintShop position paper function.

[About the Author: Bob Ely is an electrician for the State of New Jersey. He has owned and used Atari 8-bit computers since 1982. Bob has been an active member of JACS since 1985. He is available for comment on the Citadel network Atari8 room as Dr. Jolts and is also a GEnie user as R.ELY1]

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The Power User

M.E. Stefan-Acta

Task Switching with SnapShot

Welcome back to The Power User. Last time, we discussed the safer use of SpartaDOS 3.2d with hard disk systems. This issue, we discuss Tom Hunt's SnapShot.

However, first I must make a special request to all users with the ability to program in assembly language. Tom Hunt is heading an effort with a group of very talented programers to produce an all new DOS. The new DOS (unnamed at this time) will be compatible with SpartaDOS, yet it will include a lot of very advanced features, including a turbo charged batch language, MS-DOS command syntax, very low Memlo, etc.

Tom is currently requesting advanced users/programers with experience in system programing to provide assistance with the effort. Please get in touch with Tom at the Closer To Home BBS (419-368-4413). (Disclaimer: This is an independent effort, not affiliated with ICD in any way.)

Now, without further ado, let's begin this month's discussion. Before I describe SnapShot, I must explain what exactly task switching is. I've seen many Atarians describing multi-tasking and task switching as being the same thing. That's an absurd assumption.

Task switching is the ability to suspend a program (Task 1), place it in the background, run another program (Task 2), do what you have to, and then be able to return to where you left off in the first program (Task 1).

The difference between task switching and multi-tasking is that when you multi-task all programs are running concurrently, while task switching only allows one program to be active at time. The other tasks remain suspended in the background.

SnapShot is a task switching environment very similar to Software Carousel or Back & Forth (for those of you that, like me, had the displeasure of working with MS-DOS compatible computers at some time). I would also like to add that true multi-tasking is not practical, at this point, with the Atari 8-bits (although it is possible).

SnapShot comes in two basic 'flavors'. The HD 'flavor' works with Hard Disk Systems and allows you to have 10 programs suspended in the background at the same time. The M 'flavor' works with Extended Memory (the upper 64K on top of the 130XE or an expanded 800XL) and allows two programs to be active in memory at the same time.

All versions of SnapShot require a minimum of 128K of memory and an XL/XE (sorry, no 400/800 compatibility) in order to work. The HD versions also require a hard disk or a very large RAM disk. All versions use about 1K of conventional memory.

There have been many versions of SnapShot released in the past two or so years. Let's look at the versions.

Memory Versions

The first version we discuss here is 1.1M. This version is important because it works with a utility program called Softboot, which allows you to change "SnapShots" (Tasks) and boot from an all new disk.

For example, you can be running AtariWriter Plus in one SnapShot and Ballblazer in the other. You may even run two different DOSes (Sparta in one, MyDOS in the other) in the two SnapShots. However, you cannot have SpartaDOS in both SnapShots, since version 1.1 only swaps the lower 48K of memory into the upper 64K. Therefore, the overlays SpartaDOS places under the OS will remain intact, and the result will be a death disk. Consider yourself warned!

The next Memory version worth discussing is version 1.5m. This version works perfectly with SpartaDOS and offers the widest range of compatibility with other software of all the Memory versions. Furthermore, most compatibility problems can be cured with a utility program called Rehack13 (Before running the incompatible program, run this utility and you are set).

This is the version I use every day and couldn't live without. I can be running Carina BBS (you need the Rehack13 utility to run Carina II) in one SnapShot, press [Help] or [Control]+[Shift]+[-] and jump to another SnapShot to run Bobterm (for example), and then come back to Carina. However, this version will not run Express Pro.

The most recent version as of this writing is 3.2M. This one is essentially 1.5M, but is compatible with Express Pro. Note that this version will ONLY run in conjunction with Express Pro, and will only work with the Sysop's node. For that reason, Express Sysops must first contact Tom Hunt for information on how to get their customized version. This is one utility that Express Sysops can't do without.

Hard Disk Versions

The Hard Disk versions are somewhat more complicated and more dangerous. If you are not careful using these, you can end up with one messed up partition. For that reason, I must insist that if you use these versions, please set SnapShot up to use its own, exclusive partition (a recommendation that is also insisted upon by Tom Hunt).

All HD versions are also very similar in the way they work. You can have up to ten programs available at the same time residing on your hard disk (or very large RAM disk). For example, a user might have AtariWriter Plus, Bobterm, TextPro, DOS, Turbo Basic, a BBS, etc. all set up and be able to switch from one to another by pressing [Control] +[Shift] +[1], [Control]+[Shift]+[2], [Control]+[Shift]+[etc].

This is an extremely powerful tool and, as will all the other versions of SnapShot, it can put your Atari XL/XE into an entirely new realm of productivity.

The current hard drive version is 3.0HD, and it works fine with the Black Box, the MIO board and the Multi-Plexer enhancements. Also worth mentioning is that Steve Cardin co-wrote the latest HD version. It is compatible with the same software as version 1.5M and can work in conjunction with the Rehack utility.

In conclusion, if you are not using SnapShot, you are simply not getting the most out of your Atari. It's the perfect use for extended memory, and it provides a great reason for expanding your XL memory. Try it; I promise you will not be disappointed.

I would like to thank Tom Hunt for all of his assistance in preparing this column and for writing what I consider to be the most important piece of software for Atari XL/XE computers since SpartaDOS.

Before we conclude this discussion, I would also like to encourage everyone to register SnapShot with Tom. The suggested donation is $10.00, but the program is worth at least eight times that! It's quite a bargain, wouldn't you agree?

About the Author: M.E. Stefan-Acta is an Atari 8-bit power user and can be reached as the sysop of the Power User BBS at (513) 298-6983.

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Lakewood, CO 80226
Guy McDaniels (303) 238-2366
Meet: ACD/STIG: Aurora Public Library, 14949 E. Alameda Ave. STarfleet: Pamona HS, 8101 W. Pamona Dr.
Day: ACD: 1st Tue.; STarfleet: 2nd Fri.; STIG: 3rd Tue. Time: 7:00 PM
BBS: (303) 343-2956

P3ACE
PO Box 17779
Colorado Springs, CO 80935-7779
Steve Leser (719) 576-3357
Meet: T.J. Maxx Center at Rustic Hills
Day: 8-bit: 1st Tue., ST: 4th Thu. Time: 7-9PM
BBS: Laser (719) 527-1374

CCCC 127 Pinnacle Rd.
Bristol, CT 06010
Rich Scheidel (203) 589-3738
Meet: 127 Pinnacle Rd., Bristol, CT.
Day: 3rd Wed. Time: 7:30PM

STARR
15 John St.
Ansonia, CT 06401
Madelon Wilson (203) 735-6711
Meet: Greater New Haven State Tech. College, 88 Bassett Rd., North Haven, CT.
Day: 3rd Thu. (exc. Aug.)
BBS: (203) 421-4861

CDACC
60 Center Rd.
Magnolia, DE 19962
Tom Baldwin (302) 697-0671

ABLE PO Box 1172
Winter Park, FL 32790
Hadley Nelson (407) 671-0317
Meet: Bush Science Ctr., Rollins College
Day: 2nd Wed Time: 7PM

JACE 109 Davis St.
Neptune Beach, FL 32266
Bill Zaiser (904) 247-0230
Meet: Call (904) 724-2610 for directions
Day: 1st Sat. Time: 6:30PM
Dues: $12/yr
BBS: The Wall (904) 730-8659

PACE 2439 Moorehaven Drive East
Clearwater, FL 34623-1615
Alan Frazer (813) 791-0912
BBS: Tut's (813) 797-8449

queST 11201 122 Ave. N. #119B
Largo, FL 34648-2626
Terry Weigand (813) 581-7988
Meet: Tampa College (Clearwater campus), 15064 US Hwy. 19 N., Clearwater, FL.
Day: 1st Sat. (Holiday, 2nd Sat.) Time: Noon

STARFACE
575 Staffordshire Dr. E.
Jacksonville, FL 32225
BBS: Lief's World (904) 573-0734

TBAA 13321A Gouvernors Dr.
Tampa, FL 33618
Butch James (813) 237-4306
Meet: Seminole Heights Library, 4711 Central Ave.
Day: 3rd Tue Time: 7PM

MGAUG
Rt. 1 Box 362M4 Carl Sutton Rd
Lizella, GA 31052
Jeff Vincent (912) 836-3852
Meet: Tattnall Square Academy, Macon, GA.
Day: 2nd Sun. Time: 2PM

STAR 3069 N. Brook Dr.
Chamblee, GA 30341
Tommy Mersinger (404) 938-2718
Day: 3rd Mon

CUSTUG
PO Box 3442
Champaign, IL 61826-3442
Lee Johnson (217) 356-7916
Meet: Urbana Free Library Auditorium, corner of Elm and Race, Urbana, IL.
Day: 2nd Wed. Time: 7PM

EAUG 2425 Crislisa Dr.
Alton, IL 62002
Hank Vize (618) 465-0342
Meet: Alton Square Mall Community Room
Day: 1st Mon. Time: 7PM
BBS: Eastside (618) 254-6077, Garage (618) 344-8466

GAUG 55 Herring St.
Galesburg, IL 61401
Russ Watson (309) 343-6609
Meet: Community Center on Simmons St. in Galesburg, one block sourth of downtown.
Day: 2nd Mon. Time: 7PM

LCACE
PO Box 8788
Waukegan, IL 60079-8788
Mike Brown (708) 336-1128
Meet: Warren-Newport Public Library, 244 O'Plain Rd., Gurnee, IL.
Day: 2nd Sat. Time: 11AM-3PM
BBS: Python (9600) (708) 680-5105, Pegasus (708) 623-9570

QCACC
PO Box 1036
Moline, IL 61265
Donna Lemaster (309) 755-3183
Meet: Moline Public Library, 403 17th Ave.
Day: 1st Mon. Time: 7PM
BBS: (309) 755-2748

RACC 3693 Renfro Rd.
Cherry Valley, IL 61016
H. Jake Olbrich (815) 332-5303
BBS: Knights of Camelot (815) 226-2388

SCAT 7713 Crabtree Ct.
Woodridge, IL 60517
Meet: College of Dupage, Student Resource Center on Lambert Rd. between Roosevelt and Butterfield, Glen Ellyn, IL.
Day: 1st Sat. (check BBS) Time: 10AM
BBS: SCAT (708) 231-7227

STAR 337 N. 43rd St.
Belleville, IL 62223
Craig Carter (618) 233-6675
Meet: Illinois Power Bldg., 1050 West Blvd.
Day: Last Mon. (exc. December) Time: 7PM

ACORN
3627 Iowa Court
Fort Wayne, IN 46815
Meet: Shawnee Branch, Allen County Public Library
Day: 1st Sat. Time: 10AM-1PM
BBS: (219) 744-1396

ASCII 1752 Alimingo Dr.
Indianapolis, IN 46260
Dan Ward (317) 254-0031
BBS: The Zoo (9600) (317) 356-5519, It's Not a Game Machine (317) 581-9031, Crossroads Broadcast (317) 878-4069

CRAG PO Box 10995
Merrillville, IN 46411
Randy Noak (219) 663-6912
Meet: Broadway Music, Greentree Plaza, 1509 W. 81st (US-30)
Day: 2nd Wed. Time: 7PM

WACE c/o M. Merica, 501 Trotter
Maize, KS 67101
Meet: Wichita Water Dept, 1701 Sim Park Dr, Wichita
Day: 2nd Sat. Time: 1PM

AEL PO Box 34183
Louisville, KY 40232
Lawrence Estep (812) 944-8997
Meet: Central Jefferson County Government Center, 7201 Outer Loop
Day: 2nd Sat., 8bit SIG: 1st Wed., ST SIG: 4th Wed. Time: 11:30AM/SIGS: 7:30PM
BBS: Atari Scene! (502) 456-4292

BRACE
3209-B Baird Ct.
Lexington, KY 40515
Hal Nason (606) 272-0383
Meet: Lexington Free Public Library, Downtown
Day: 3rd Tue. Time: 7-9PM
Dues: $15/indiv., $20/family, $10/assoc.

CASTE
314 W. Claude St.
Lake Charles, LA 70605
Tim Bowles (318) 477-3243
Meet: College Park Nazarene Church, 340 E. Prien Lake Rd.
Day: Last Sat. Time: 1PM
BBS: General Store 14.4K (318) 855-6939

SSAG PO Box 129
Hyde Park, MA 02136
Dana Jacobson (617) 569-0224
Meet: Room 207, McCormack Hall, Harbor Campus, UMASS/Boston
Day: 3rd Fri. Time: 7PM
BBS: Question Mark (617) 328-9230, Toad Hall (617) 567-8642

WMAUG
PO Box 315
Chicopee, MA 01021-0315
David Scarpa (413) 283-4171
Meet: Chicopee Public Lib. Main Branch, Front St.
Day: 1st Wed. Time: 7PM
BBS: WMAUG Junction (413) 786-3870

CACE PO Box 6161
Jackson, MI 49204

GAG PO Box E
Flint, MI 48507
Jerry Cross (313) 736-4544
Meet: GMI Institute Rm 817A, Chevrolet and 3rd
Day: 2nd Wed. Time: 6:30PM
BBS: FACTS (9600) (313) 736-3920, Carnival (313) 235-0158, 9 Planes (313) 233-6095

GLASS
PO Box 99737
Troy, MI 48099
Byron Johnson (313) 758-2741
Meet: Troy-Athens High School, 2 blocks north of Wattles on John R Rd.
Day: 1st Thur. Time: 7PM

GRASS
2185 Newport SW
Wyoming, MI 49509
Len Brothers (616) 532-0653
Meet: Wyoming Pub. Library, 3350 Michael SW, Grand Rapids, MI.
Day: 1st Wed. Time: 7PM

MACE PO Box 2785
Southfield, MI 48037
Meet: Southfield Civic Center, Room 115, 10-1/2 Mile and Evergreen, 1/2 mile south of I-696.
Day: 3rd Tue. Time: 7:30PM
BBS: Tari Forest (313) 278-6466

SALSA PO Box 1342
Sault Ste. Marie, MI 49783
Roger Aube (705) 759-3922

STAG 4765 N. Eastman Rd.
Midland, MI 48640
Bryant LaFreniere (517) 835-2234
Meet: Rudy Zauel Memorial Library, corner of Center & Shattuck in Saginaw Township.
Day: 2nd Sat. Time: 9AM

STING PO Box 321
Marne, MI 49435-0321
Donna Meyer (616) 942-5167
Meet: Plainfield Township Library, 2650 5 Mile Rd NE, 1/2 mile east of N. Kent Mall.
Day: 2nd Wed. Time: 6:30-9PM
BBS: STING (616) 532-5736

WAUG 14 Payeur
Ann Arbor, MI 48108
Dave Brzezinski (313) 971-3927
Meet: Colonial Lanes on S. Industrial
Day: 2nd Tue. Time: 7:30PM
BBS: MOlin's Den (313) 451-0524

PACE 4835 Crosley Ave.
Duluth, MN 55804-1219
Tracy Hendershot (218) 525-1058
Meet: Duluth Radisson, check BBSes. Bi-monthly meetings (Jan, Mar, May, Jul, Sep, Nov).
Day: 3rd Sun. Time: 1:30PM

SPACE PO Box 120016
New Brighton, MN 55112
Nathan Block (612) 922-8012
Meet: Flacon Heights Community Center, 2077 W. Larpenteur Ave., Falcon Heights
Day: 2nd Fri. Time: 7PM
BBS: SPACE (612) 488-5973

ACE of SL
PO Box 3508
St. Louis, MO 63143
Nick Barr (314) 741-1505
Meet: Thornhill Branch of St. Louis County Library, Fee Fee and Willowick, Maryland Heights
Day: Date and time varies

KCAC 1107 W. 88th St.
Kansas City, MO 64114
Gary Leach (913) 236-9643

MDC-RCC
2610 Woodsage Dr.
Florissant, MO 63033
Al Owen (314) 837-2971
Meet: St. Louis Co. Public Library, Prairie Commons, 915 Utz Lane, Hazelwood
Day: 4th Wed. Time: 5:30PM

RACE Box 364
Frenchtown, MT 59834
Tom Tucker (406) 626-4410
Meet: National Guard Armory, 2501 Reserve St., Missoula, MT.
Day: 3rd Sun. Time: 7PM

RACE 4360 Hunters Club Dr.
Raleigh, NC 27606
Lewis Midyette (919) 828-4319
Meet: Check Galaxy BBS, look under Bulletins for "A word from the president of RACE"
BBS: Galaxy (919) 552-0974

MACUG
129-2 Sirocco Dr.
Minot AFB, ND 58704

O-ACES
8629 S. Glenview Dr.
La Vista, NE 68128
Pete Killian (402) 592-5427
Meet: La Vista Recreation Center, 8116 Parkview Blvd.
Day: 2nd and Last Wed. (exc. Nov. & Dec.) Time: 7:30PM

JACS PO Box 710
Clementon, NJ 08021
Mike Hopkins (609) 783-1423
Meet: Camden County Library
Day: 3rd Tue. Time: 7-9PM
BBS: (609) 346-1224

AACE 1021 Sagebrush Trail SE
Albuquerque, NM 87123
Richard Houser (505) 299-3977
Meet: Gas Co. of New Mexico, 4625 Edith Blvd.
Day: Gen: 1st Sat and 3rd Tue., 8bit: 2nd Tue.
BBS: Astro (505) 260-0448

HISUG PO Box 2152
Sparks, NV 89432
Gary Marston (702) 885-2881
Meet: Round Table Pizza, Baring Village, 1201 Baring Blvd.
Day: 3rd Thur. Time: 7PM
BBS: Unreliable (702) 358-6307

SNACC
48 Lafaette St.
Las Vegas, NV 89110
Harvey Cannon (702) 459-4089
Meet: Winchester Center, 3130 McLeod
Day: 1st Thur. Time: 7-9PM
BBS: SNACC (702) 438-2208

ACORN
PO Box 24920
Rochester, NY 14624
Meet: Brighton HS, 1150 Winton Rd. S, Rm 262S.
Day: 2nd Wed. Time: 7PM
BBS: Dimension's End (716) 436-3078

BRAG*ST
PO Box 1035
Buffalo, NY 14225
Mark Pierro (716) 691-7844
Meet: Erie Community College, North Campus, Room S-105 in the Student Center.
Day: 3rd Thu. Time: 7:30PM

CDACE
PO Box 1910
Schenectady, NY 12301
Bob Thompson (518) 439-5356
Meet: Computer Cellar, Westgate Plaza, Albany
Day: ST: Last Wed., 8-bit: Qtrly. Time: 6:30PM

LIAUG
PO Box 92
Islip, NY 11751
John Aalto (516) 589-6754
Meet: Smithtown Library, Nesconset branch
Day: 1st Sat.
BBS: New Nest (516) 234-4943, Star Scan (516) 399-4252

OHAUG
3376 Ocean Harbor Dr.
Oceanside, NY 11572
Alex Pignato (516) 678-6081
Meet: Plainview-Old Bethpage Library, 999 Old Country Rd. in Plainview
Day: Usually 2nd Sat.
BBS: New Nest (516) 234-4943

WNYAUG
PO Box437
Buffalo, NY 14207-0437
Mike Husband (716) 825-8486
BBS: Wizard's Attic (716) 681-1654

ACCT 4487 289th
Toledo, OH 43611
Dave & Brenda Micka (419) 729-1891
BBS: Disk Drive-Thru (419) 885-3441

ACEC 1287 Dennison Ave.
Columbus, OH 43201

Cin'Tari
PO Box 14959
Cincinnati, OH 45250
Mike Hill (513) 722-2011
Meet: Star Bank, 7660 Reading Rd
Day: 2nd Sat Time: 3:30PM
BBS: Cin'tari Online (513) 887-9334

CVACC
PO Box 9173
Akron, OH 44305
Jon Goshorn (216) 494-0738
Meet: First National Bank, Mogadore, OH.
Day: 2nd & 4th Tue. Time: 7:30PM

MAUG PO Box 134
Ontario, OH 44862
Chuck Steinman (419) 529-2478 after 5PM
Meet: A&B Computers, 1151 Park Ave. W., West Park Shopping Center, Mansfield
Day: 3rd Sat. (exc. July) Time: 7-9PM
BBS: DataQue (419) 529-5197

MVACE
PO Box 24221
Huber Heights, OH 45424
Dan Steffen (513) 832-0749
Meet: Jaycees Clubhouse
Day: 2nd & 3rd Sat. Time: 9:30 to Noon
BBS: ACE (513) 233-9500

NASAC
1810 Cheviot Hill Dr.
Springfield, OH 45505-3508
Wendell Helfrick (513) 325-3764
Meet: "Old Schoolhouse" next to public library on S. Dixie Dr, 3 blocks S of Route 40, Vandalia
Day: 2nd Thu. Time: 7:30PM

NOAH 8
4801 Denison Ave.
Cleveland, OH 44102
Brian Boggess (216) 961-5735
Meet: AAA Video & Computers, 5538 Pearl Rd., Parma, OH
Day: 3rd Thu (Sept-June) Time: 6-8PM
BBS: Part Time (216) 582-1196

STANCE
1174 Larkspur Dr.
Lyndhurst, OH 44124
Joseph Adato (216) 449-6881
Meet: B&G Electronics, 15729 Madison Ave., Lakewood, OH.
Day: 3rd Mon. Time: 7:15PM

TACE 16564 SE 18th
Choctaw, OK 73020
Ron Hamilton (405) 387-5649
Meet: Moore Public Library, 225 S. Howard, just off SW 4th and I-35, Moore, OK.
Day: 1st Sat. Time: 1PM
BBS: TACE (405) 366-1977

ACUNET
1310 N. 2nd St.
Silverton, OR 97381
Steve Barnes (503) 873-4590
Day: 4th Tue. Time: 7PM
BBS: Salem Public Lib. (503) 588-6130, Page (503) 363-0171, Jungle (503) 393-4274.

COAC PO Box 6824
Bend, OR 97708
Aaron Leis (503) 388-7516
Meet: Ann Rita Conference Center (in front of the St. Charles Hospital on Neff Rd.)
Day: 1st Sat. Time: 5PM

DCASTE
1033 Barager
Roseburg, OR 97470
Jim Steingrobe (503) 673-1687

MACE 909 S. Stage Rd.
Medford, OR 97501

PAC PO Box 1692
Beaverton, OR 97005
David Hunt (503) 286-6276
Meet: NW Service Center (basement), NW 18th and Everett St., Portland, OR.
Day: 1st Mon. Time: 7PM
BBS: ACE of America (503) 285-4417

NAPCO
642 E. Waring Ave.
State College, PA 16801
Greg Brown (814) 238-4255

NEAT PO Box 18150
Philadelphia, PA 19116-0150
Allan Zaluda (215) 677-6751
Meet: Municipal Bldg., Bustleton Ave & Bowler St.
Day: 1st Tue. Time: 7PM
BBS: Cellar Dweller (215) 677-1370

PACS Atari 8bit
Box 312, LaSalle Univ.
Philadelphia, PA 19141
Meet: Drexel University, Room M11B, Matherson Blvd., 32nd and Market St.
Day: 3rd Sat.
BBS: (215) 842-9600 to 9604 (03&4=300 baud)

SAGE PO Box 10562
Erie, PA 16514-0562
Dennis McGuire (814) 833-4724
Meet: American Red Cross Bldg, 4961 Pittsburgh
Day: 3rd Sun. Time: 2PM

SPACE PO Box 3052
Shiremanstown, PA 17011-3052
John Slade (717) 938-3656
Meet: Camp Hill Mall Community Room
Day: 3rd Mon. Time: 7:30PM

WACO 230 Clairmont St.
North Huntingdon, PA 15642
Patty Marshall (412) 225-8637
Meet: North Huntingdown Town House, near Irwin
Day: 2nd Tue.

RACE 9512-A Adams
Ellsworth AFB, SD 57706
Rick Burton (605) 642-5353
Meet: Rapid City Public Library
Day: 4th Sat. Time: 2PM

CACE 280 Capshaw Drive
Cookeville, TN 38501
Dan Hale (615) 526-8002
Meet: Putnam County Library
Day: 1st Sat. Time: 1PM
BBS: Generic BBS (615) 432-5809

MASH 3265 Austin Peay Hwy.
Memphis, TN 38128
Randy McKinna (901) 388-3384
Meet: State Technical Inst. in the Fulton Auditorium
Day: 2nd Mon. Time: 7PM
BBS: MASH COM (901) 377-1904

NAUG PO Box 121752
Nashville, TN 37212
James Bays (615) 297-9293
Meet: Cumberland Museum and Science Center
Day: 3rd Thu. Time: 7-10PM
BBS: Nashville Exchange (9600) (615) 383-0727, Troll's Cave (615) 872-0757

AAAUA
PO Box 79-1426
San Antonio, TX 78279
Al Sherrill (512) 492-6633
Meet: Balcones Heights Comm. Ctr, 107 Glenarm
Day: 1st Tue. Time: 6:30-9:30PM

AACE 1601 Larkwood Dr.
Austin, TX 78723
Eve Kuniansky (512) 323-2016
Meet: Library. Pizza buffet 1st Thursday 6:30-8PM.
Day: 2nd Sat. Time: 2-5PM

ACCEPT
245 Longhorn Court
El Paso, TX 79907-5215
Steve Bruck (915) 858-1117
BBS: STEP (915) 755-STEP; STE-EP (915) 821-9220

GTAUG
6621 Capitol St.
Groves, TX 77619
Ray St Cyr (409) 727-7215
Day: Usually 2nd Tue.
BBS: (409) 722-6526

HACE PO Box 460212
Houston, TX 77056
Bill Kithas (713) 855-0815
Meet: Health Economics Corp., 2400 W. Loop S.
Day: 4th Wed. Time: 6:45PM
BBS: (713) 458-9923

HASTE
5306 Claremont
Houston, TX 77023
Linda Bastida (713) 923-4065
Meet: Megabyte Plus, 5181 FM1960W
Day: Last Sat. Time: 10:30AM
BBS: HASTE (713) 921-0550

SALSA
PO Box 18731
San Antonio, TX 78218-0731
Tim Hebel (512) 656-5315
Meet: Balcones Heights Comm. Ctr, 710 Glenarm
Day: 2nd Tue. Time: 7-10PM

LACE
1194 N. 250 W.
Layton, UT 84041
Marshall Walker (801) 547-9902
Meet: Clearfield Library basement, Roy, UT.
Day: 2nd Wed. Time: 7PM

STUN PO Box 27285
Salt Lake City, UT 84127
Stephen Cole (801) 967-7517
Meet: Murry High School
Day: 3rd Wed. Time: 7PM
BBS: The Bolt (801) 968-3921

CACUG
Box 767
Chewelah, WA 99109

FACCS
PO Box 487
Harrington, WA 99134-0487
Tim Osborne (509) 624-1917
Meet: Eager Beaver Computers, next to the Garland Theatre, Spokane, WA.
Day: 2nd Thu. Time: 7PM

KCACE
PO Box 2333
Bremerton, WA 98310
Bill Penner (206) 373-4840
Meet: Round Table Pizza, Silverdale, WA
Day: 2nd Wed. Time: 7:30PM
BBS: KCACE 14.4K (206) 479-2157

NCWAUG
507 King St.
Wenatchee, WA 98801
Don Dwinell (509) 662-1842
Meet: 507 King St. (unless otherwise notified).
Day: 3rd Tue. Time: 7:30PM

Starbase
8307 27th NW
Seattle, WA 98117
Steve Drake (206) 782-3691
Meet: Mountlake Terrace Library, 23300 58th Ave W, Mountlake Terrace, WA.
Day: 2nd Fri. Time: 6PM

SWAG PO Box 1515
Vancouver, WA 98668-1515
Gary Lentz (206) 573-8224
Meet: Clark County Fire Station 3 at 213 NE 120th
Day: Last Sun. (exc. July) Time: 6:30PM
BBS: Bear Cavern (206) 574-1146

MAAUG
PO Box 56191
Madison, WI 53705
Rich Noble (608) 249-4029
Meet: Madison Public Library (Main Branch), 201 W. Mifflin St.
Day: 2nd Tue. Time: 7PM
BBS: MAAUG (608) 244-6742

MilAtari
PO Box 14038
West Allis, WI 53214
Lee Musial (414) 466-7557
Meet: Greenfield Park Lutheran Church, 1236 S. 115th St.
Day: 3rd Sat. Time: Noon

NSACUG
170 Nestor Crescent
Dartmouth, Nova Scotia B2W 4B1
CANADA
Robert Smith (902) 465-5068
BBS: XEST (902) 865-0101, Coastal (902) 465-2321

NCAUG
15 Blueridge Court
Nepean, Ontario K2J 2J3 CANADA
Hardy Zeltins (613) 825-4196

TASTE
185 Varsity Row
Thunder Bay, Ontario P7B 5P2 CANADA
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WAUG 3199 McKay Ave.
Windsor, Ontario N9E 2R4 CANADA
Brian Cassidy (519) 966-0305

ASTMUM
PO Box 966, Station B
Montreal, PQ H3B 3K5 CANADA
Kest Carter-Morgan (514) 272-6631

MACAM
PO Box 5418
St. Laurent, PQ H4L 4Z9 CANADA
Terry Cowen (514) 696-3773
Dues: $25 8-bit, $30 ST, $35 both (Canadian)
BBS: Enchanted Realm (514) 366-4556

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DIG DUG	NECROMANCER
DESERT FALCON	ONE ON ONE *
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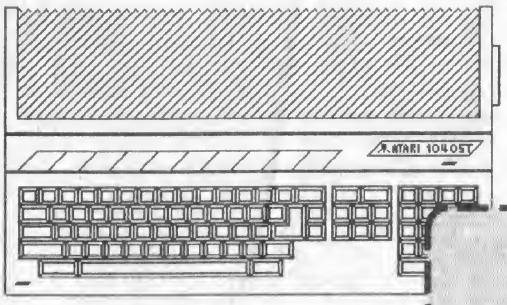

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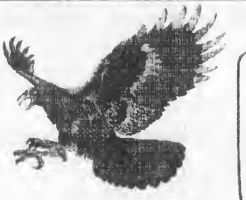

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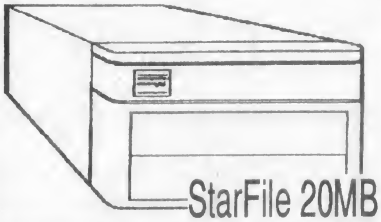

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